

**CRITICALLY REFLECTING ON EQUITY- AND IDENTITY-FOCUSED  
PROFESSIONAL LEARNING TO INCREASE CULTURAL COMPETENCY:  
A PILOT STUDY**

by  
Teresa Caswell

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## Abstract

Schools throughout the United States have experienced academic disparities between racialized student subgroups for decades. Many researchers postulate that culturally responsive instruction is a key factor towards ameliorating this problem. While student improvements may initially be seen with this approach, without transformative change affecting the cultural competence of school staff, the academic progress supporting historically marginalized students may not last. Thus, cultural competency was identified as the focal construct to design a quasi-experimental mixed-method intervention pilot study. The faculty of an elementary school (N = 82) were provided two grounding and six equity-focused professional learning sessions that included critical reflection. Journal prompts, aligned to a leveled typology, were analyzed to determine how critical reflection approach levels change over time. Cultural competency was measured with a modified version of Sevig, Highlen, and Adams (2000) Self-Identity Inventory that provided pre- and post-intervention inferential data to analyze how reported levels of cultural competency changed from pre- to post-intervention; statistically significant differences were found. Additionally, several participant journals were qualitatively analyzed through a cultural competence lens. These findings were integrated into mixed-method, joint, displays which provided greater understanding of participant growth which was found to be more amorphous than linear in nature. Implementation of this pilot research in other contexts is needed to determine generalizability of its positive impacts on school staff and longer term impacts on student achievement.

*Keywords:* cultural competency, critical reflection, equity, identity development, professional learning, pilot study, academic disparities

**Primary Reader and Advisor:** Dr. Ranjini JohnBull

**Secondary Readers:** Dr. Yolanda Abel and Dr. Chrissy Eith

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## Dedication

This dissertation is dedicated to the “Tree Frog Elementary School” staff, and other education professionals, who consistently work to better understand themselves and thus provide the most equitable instruction, support, and relationships to *every* student.

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## Executive Summary

Schools throughout the United States have experienced academic disparities between racialized student subgroups for decades (Essa, 2015; Musu-Gillette et al., 2017). Many researchers postulate that culturally responsive instruction is a key factor towards ameliorating this problem (Bottiani et al., 2018; Brace, 2011; Ladson-Billings, 2001; Little & Tolbert, 2018). While student improvements may initially be seen with this approach, without transformative change affecting the cultural competence of school staff, the academic progress supporting historically marginalized students may not last (Mayfield & Garrison-Wade, 2015). Thus, cultural competency was identified as the focal construct to design a quasi-experimental, mixed methodology, intervention pilot study.

## Problem of Practice

The United States is becoming more racially diverse (Musu-Gillette et al., 2017) but continues to demonstrate the historically predictable disparities in academic achievement between racial and socio-economic status (SES) student subgroups recognized for decades (Coleman et al., 1966; ESSA, 2015; Gardner, 1983; NCLB, 2001). Recent studies demonstrate that while achievement disparities between SES subgroups are widening (Reardon, 2011; Reardon, 2013), those between racial subgroups are not narrowing to the extent believed (Musu-Gillette et al., 2017; Paschall, Gershoff, & Kuhfeld, 2018). In other words, White and Asian students demonstrate achievement percentiles above Black and Hispanic students at every K-12 level throughout the United States (Musu-Gillette et al., 2017; Paschall, Gershoff, & Kuhfeld, 2018; Reardon, 2013). Factors contributing to academic disparities include student context and opportunity gaps (Alexander, Entwisle, & Olson, 2007; Flores, 2007; Herman, 2009; Park & Holloway, 2017; Wasserberg, 2017), inequitable allocation of fiscal and human resources (Desimone & Long, 2010; Jimenez-Castellanos, 2010; McMullen & Rouse, 2012; Morris &

Perry, 2016), bias (Ferguson, 2003; Kozlowski, 2015; Watanabe, 2008), cultural competency (Delpit, 1995; Ladson-Billings, 1994, 2000; Milner, 2006), teacher efficacy (Ashton & Webb, 1986; Bandura, 1986; Dembo & Gibson, 1985; Sleeter, 2001), and student efficacy (Bandura, 1986; Herman, 2009; Schunk & Pajares, 2009). These factors are important considerations as school leaders and other scholar-practioners respond to academic disparities between racial subgroups in their context.

### **Factors Contributing to Academic Disparities between Racial Subgroups at a New School:**

#### **A Context-Specific Needs Assessment**

Tree Frog Elementary School (TFES; pseudonym) opened in July 2019. Approximately 75% of TFES students identify as students of color, and 10% are socio-economically disadvantaged, evenly distributed among racial subgroups. However, the combined reading and math proficiency of students moving to TFES, as measured by end-of-grade assessments, for Black and Hispanic students (61.9% and 60.7%, respectively) was, on average, below the achievement of their White and Asian peers (85.1%, and 93.4%, respectively; North Carolina Department of Public Instruction [NCDPI], 2019). Several racially-focused factors affect outcomes for students of color including stereotyping, ongoing segregation, and education policies related to them (Darling-Hammond, 2015; Jimenez-Castellanos, 2010; Orfield, 2013; Shapiro & Johnson, 2005). However, it is teachers' responses to race-based factors and students of color, and their subsequent instruction, that has a direct impact on student achievement (Brace, 2011; Gershenson, Holt, & Papageorge, 2016; Peterson et al., 2016).

Approximately 90% of the initial TFES student population was derived from three nearby schools. The principals and some staff from these three schools volunteered to participate in interviews and surveys, respectively, to help determine which factors impacting academic

disparities between racialized student groups were most salient. Constructs investigated within this needs assessment study included academic optimism (a latent construct developed through the combination of a school's faculty trust of parents and students, academic emphasis, and collective efficacy; Hoy, Tarter, & Woolfolk-Hoy, 2006), teacher efficacy (both personal and general; Bandura, 1986), and cultural competency. Each of the focal schools illustrated reduced levels of reported agreement, or discontinuities between principal and staff perceptions, with these constructs at each school. Ultimately, cultural competency was found to be the most salient factor across all three focal schools that may be impacting students joining the TFES context and thus became a substantial focus of the literature review that shaped the final intervention pilot study.

### **Conceptual Framework**

Two theories grounded this pilot intervention study focused on increasing cultural competency with the integration of critical reflection journaling into equity- and identity-focused professional learning. Together, these theories provided the basis for adult learning sessions and an instrument for measuring pre- and post-intervention of reported cultural competence.

#### **Optimal Theory Applied to Identity Development**

Optimal theory applied to identity development (OTAID; Myers et al., 1991) acknowledges an individual's numerous identities through a continuum of levels ranging from personal to interpersonal to institutional. As an individual becomes more aware of their identity, and how society responds to beliefs about identities different from oneself, oppressing some and privileging others, their awareness of those beliefs—their cultural competency—improves (JohnBull, 2012). Stages of awareness with the OTAID, from lower to higher, are individuation, dissonance, immersion, internalization, and Integration and were the basis for Sevig, Highlen,



and Adams' (2000) self-identity inventory used to measure participants' reported levels of cultural competency pre- and post-intervention.

### **Transformational Theory of Adult Learning**

Adult learning is most effective when one becomes critically reflective of their own assumptions about why a previous or an alternative point of view exists (Mezirow, 1998). While *reflection*, or the general process of examining one's experiences and responses to desired change (Fook, 2015), is often found in educational interventions (Basma & Savage, 2018), *critical reflection* refers to the process of investigating one's beliefs to, ultimately, transform them (Fook, 2015; Gorski & Dalton, 2019; Mezirow, 1998). Therefore activities such as critical reflection through race-reflective journaling (Milner, 2003) involve participants in an analysis of their assumptions of beliefs rather than their experiences. In this way, individuals participate in the transformational learning (Mezirow, 1998) process necessary to positively engage in and advocate for social justice (Gorski & Dalton, 2019).

### **Synthesis of Intervention Research Literature**

Multiple interventions were considered including teacher efficacy and instructional practices (Bandura, 1986; Ladson-Billings, 2000). However, in order to first impact an individual's understanding of their identity and potentially increase their cultural competency (JohnBull, 2012; Sevig, Highlen, & Adams, 2000), the researcher focused on interventions to impact teachers' interactions with cultural differences (Mayfield & Garrison-Wade, 2015) through reflection on implicit and explicit biases (Milner, 2003). Critical reflection, through journaling as an intervention, can be layered with a variety of professional learning efforts (Milner, 2003; Gorski & Dalton, 2019).

### **Implicit Bias**

Acknowledging one's implicit biases is essential to consciously counteracting them and, as a result, improving their cultural competency (Jacoby-Senghor et al., 2016; Ladson-Billings, 2000; Mayfield & Garrison-Wade, 2015). Research has shown that personalizing bias, using empathy strategies, can decrease negative associations with others (Hahn & Gawronski, 2019), however, interventions need to be intensive and sustained over time (Lai et al., 2016). A variety of activities have been investigated and discussed in the research including acknowledging and counteracting negative racial associations found in popular culture (Caviness, 2018). The inundation of images connecting positive associations with things that are white and negative with things that are black may imprint on individuals (Caviness, 2018). This recalls Clark and Clark's (1947) seminal work colloquially known as *the doll test* which found that Black children, regardless of their skin tone, associated positive statements with White dolls while Black dolls were identified when asked about negative statements (such as show me the *ugly* doll). Intervention research has found that positive associations with individuals of color can begin to counteract implicit bias (Jordan & Hernandez-Reif, 2009; Powell-Hopson & Hopson, 1988), however, positive imagery cannot alone sustain transformative changes in one's assumptions and beliefs (Mezirow, 1997; 1998).

### **Critical Reflection**

As an intervention, critical reflection is operationalized as one's analysis of their beliefs and biases, leading to a reform of actions (Gorski & Dalton, 2019). Prompts should be intentionally designed to elicit this level of response and encourage, over time, transformational change (Gorski & Dalton, 2019; Liu, 2015). Researchers have recommended that critical reflection be a part of teacher-preparation programs (Durden & Truscott, 2013) and that race-reflective journaling (Milner, 2003), using carefully provided prompts (Howard, 2003; Milner,

2003) be used to understand the racial influences present in their daily lives. These critical reflections allow participants to authentically capture experiences and grapple with the resultant impact that may exist on their assumptions and beliefs (Mezirow, 1998).

### **Research Purpose and Objectives**

The purpose of this pilot study was to determine if equity- and identity-focused professional development, embedded with critical reflection journaling as an intervention, changed participants' cultural competence. The researcher hypothesizes that adding critical reflection to professional learning will decrease implicit bias and increase cultural competency as measured by a condensed version of Sevig, Highlen, and Adams (2000) Self-Identity Inventory (SII).

The following outcome research questions guided this study:

RQ1. In what ways do Pre-K-5 staffs' critical reflection approach levels change over time when responding to a race-reflective journaling prompt immediately following equity professional development sessions?

RQ2. How do Pre-K-5 staffs' reported levels of cultural competency change after engaging in critical reflection and equity professional development?

### **Research Design**

This study employed a quasi-experimental, embedded mixed method design (Creswell & Plano-Clark, 2011) to provide intervention activities focused on increasing cultural competency as a proximal outcome to narrowing academic disparities between student subgroups at TFES. Each intervention session included an opportunity for critical reflection within race-reflective journals (Milner, 2001), using a prompt written to elicit responses that challenged participants'

beliefs (Gorski & Dalton, 2019) and provided qualitative data analyses for both outcome research questions.

### **Pilot Study**

The combined features of this pilot study (professional learning and measures) have not been provided to school staff before in this configuration including using the SII as a measurement tool. The resulting quantitative analyses used sample sizes too small to effectively achieve statistical significance at the 5% confidence level (Lee, Whitehead, Jacques, & Julius, 2014). Findings not demonstrating significance at the  $\alpha \leq .05$  level may be overlooked when determining the efficacy of a pilot study (Lee et al., 2014). Thus, Lee and colleagues (2014) recommend that significance levels, “other than the traditional 5% should be considered to provide preliminary evidence of efficacy” (p. 7). As such, this study set the confidence level at 10%.

### **Intervention**

The faculty of TFES (N = 82) were provided two introductory grounding sessions and six equity-focused professional learning sessions, averaging 90 minutes each, that included critical reflection. The grounding sessions focused on building a collective understanding of key vocabulary, participating in an identity poem activity to support relationships and collegiality, and being provided time to create an online journal and voluntarily complete the pre-intervention survey.

The six professional learning sessions were developed using research-based themes and activities learned within the intervention literature review. Topics included seeing race, microaggressions, micro-interventions, school data and academic tracking, implicit bias, and

empathy. Critical reflection prompts were developed using Gorski and Dalton's (2019) typology and validated through cognitive interviews.

### **Data Collection and Analyses**

Data collection aligned to the pilot study research questions, constructs measured, and data analyses. A modified version of Sevig, Highlen, and Adams (2000) Self-Identity Inventory (SII) provided pre- and post-intervention inferential data, using the paired samples t-test (parametric) or Wilcoxon Signed Rank test (nonparametric) to analyze research question two. The pre-survey was provided during the first grounding session and the post-survey opened two weeks after the final intervention session. Each participant used a unique identifier to ensure their anonymity and allow the pre-post surveys to be paired (N = 45).

Participant journals included the same unique identifier used in the pre-post surveys to ensure participant privacy for the those that chose to submit them to this study (N = 22) for qualitative analyses and further combination into mixed method joint displays. A combined typology of prompts and responses was developed to determine any change in participants' level of critical reflections within their journals. Additionally, six participants were selected to qualitatively analyze their journals through a cultural competency lens followed by three examined further using a mixed methodology through joint displays.

### **Findings**

Two separate qualitative analyses found overall increases in participants' critical reflection levels and individualized increased cultural competency found *within* levels of the OTAID (Myers et al., 1991) model. For both measures, participant growth was found to be an amorphous, versus linear, process that necessitated a holistic understanding of how critical

reflection of one's assumptions (Mezirow, 1998) can vary in the depth and breadth of new views counter to past beliefs.

Findings, across multiple analyses and SII stages, indicated overall positive changes in participant's cultural competency with staff's lower stages—Individuation and Dissonance—reduced or constant while higher levels—Internalization and Integration—increased. Statistically significant results were found in the Immersion ( $p = .03$ ; decrease in pre-post means of .26) and Internalization stages ( $p = .02$ ; increase in pre-post means of .31) of the *all participants* ( $N=45$ ) analyses. The disaggregated *journal participants* ( $N = 22$ ) analyses also found statistical significance with the Immersion ( $p = .10$ ; decrease in pre-post means of .21), Internalization ( $p = .04$ ; increase in pre-post means of .42), and Integration stages ( $p = .10$ ; increase in pre-post means of .23) These changes between respondents pre- and post-intervention survey responses at conventional confidence levels ( $p<.05$ ) indicated that the changes in reported cultural competency beliefs were not likely by chance (McLeod, 2019).

The mixed methodology of three stratified, purposeful, sample participants highlighted the importance of using qualitative analyses to understand participants quantitative data. The researcher also found that some participant's quantitative results belied their qualitative cultural competency growth. As a result, a new framework was developed to illustrate the tangled integration of critical reflection, professional learning, and cultural competency when one enters the process of transformational learning.

A confirmatory study of this pilot intervention research should be implemented to determine its generalizability across contexts and longer term impacts on student achievement. Implications for practice, including principal-led equity work and trust-building activities, are also discussed.

## Critically Reflecting on Equity- and Identity-Focused Professional Learning to Increase Cultural Competency: A Pilot Study

Throughout the United States' history of public education, student attainment of academic benchmarks indicates varying rates of achievement; often, these academic disparities occur along racial and socio-economic lines (Coleman et al., 1966; ESSA, 2015; Gardner, 1983; NCLB, 2001). Despite attempts by schools, districts, states, and the federal government to eliminate differences in academic outcomes, the problem persists and disproportionately affects traditionally marginalized groups of students including Black, Hispanic, and the socio-economically disadvantaged<sup>1</sup> (Musu-Gillette et al., 2017; Paschall, Gershoff, & Kuhfeld, 2018; Reardon, 2011; Reardon, 2013). Student subgroups, a term referencing specific sets of students by demographic factors such as race, ethnicity, gender, and socio-economic status (SES), are often academically compared to each other with differences in test-scores and other achievement indicators referred to as *gaps* (Coleman et al., 1966; Hilliard, 2003; Ladson-Billings, 2007; Milner, 2010).

A myriad of gap terminology has evolved within the literature to describe these disparities with the phrase achievement gaps as one of the most prevalent and defined as the difference between the average performance of one group and another; most often these groups are students of color compared to White students, respectively (Chambers, 2009; Flores, 2007; Hilliard, 2003). The literature also identifies excellence gaps referring to differences in subgroup outcomes at the highest levels (Hardesty, McWilliams, & Plucker, 2014) and race-specific test-score gaps such as Black-White, Asian-White, and Hispanic-White (Chambers, 2009; Ferguson,

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<sup>1</sup> This dissertation will refer to the Black/African American population as "Black" to reflect the diverse nature of this population in the researcher's context; at TFES there are as many or more direct immigrants from Africa or other nations as there are individuals born in the United States with ancestors representative of those brought to America against their will. References to other research will reflect the terminology used therein.

2003; Hartney & Flavin, 2014). The literature discusses negative implications of gap descriptors; for example, achievement gaps between racial subgroups may infer some type of academic capability on the part of the lower performing subgroup—typically students of color--versus objective differences in academic outcomes (Chambers, 2009; Flores, 2007; Hilliard, 2003; Ladson-Billings, 2007; Milner, 2010). Moreover, this type of deficit language focuses on students thereby suggesting any achievement difficulties lies with them (Chambers, 2009; Ladson-Billings, 2007).

More recently, researchers have been operationalizing the term opportunity gap as the difference in educational experiences and resources between traditionally disadvantaged students and their White counterparts (Carter & Welner, 2013; Darling-Hammond, 2004, 2015; Flores, 2007). Shifting terminology from achievement gap to opportunity gaps focuses the narrative on the disparities between what students receive from schools and works to remove deficit language from the differences in educational outcomes (Carter & Welner, 2013; Flores, 2007). This shift from the effect (disparate outcomes) to the cause (disparate inputs) begins the process of problem-solving, especially for those living in poverty and students of color (Carter & Welner, 2013). However, differences in academic outcomes between subgroups also exist within affluent communities and among high achieving students (Diamond, Lewis, & Gordon, 2007; Hardesty et al., 2014). While there are certainly opportunity gaps at these levels, they may be more about withheld opportunities based on educational biases versus a lack of fiscal or human resources (Ferguson, 2003; Kozlowski, 2015; Wasserberg, 2017).

The variety and evolution of terms responding to student outcome disparities between subgroups emphasize the breadth and depth of the problem. The term *gap*, however, is at its core, deficit language as it includes the definition of being incomplete or *deficient* (Merriam-Webster,



n.d.). Related to this idea of deficiency are implicit biases, understood as the unintentional response toward, or belief about, those different than ourselves (Jacoby-Senghor, Sinclair, & Shelton, 2016). These unconscious responses may manifest when connections to one's perceived meaning of terminology, such as *gap*, resonates with their preconceptions about those unlike themselves. In fact, Maiese (2011; 2017) noted the connection between language, beliefs, and emotional responses. Therefore, this literature synthesis opts to use the phrase *academic disparities*, defined by the researcher as the difference in educational outcomes between student subgroups taught the same standards, instead of any type of gap terminology in an attempt to prevent biased subjectivity through this problem of practice exploration.

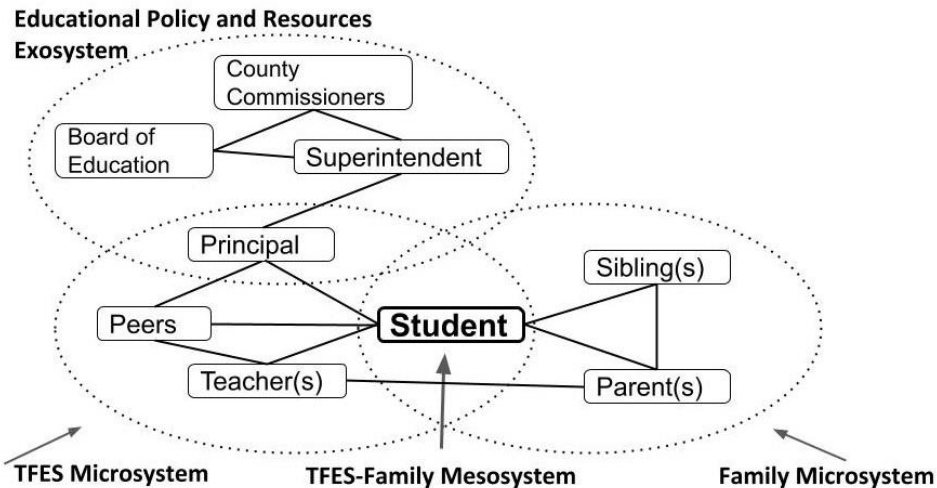
### **Problem of Practice**

The United States is becoming more racially diverse (Musu-Gillette et al., 2017) but continues to demonstrate the historically predictable disparities in academic achievement between racial and socio-economic status (SES) student subgroups recognized for decades (Coleman et al., 1966; ESSA, 2015; Gardner, 1983; NCLB, 2001). Recent studies demonstrate that while achievement disparities between SES subgroups are widening (Reardon, 2011; Reardon, 2013), those between racial subgroups are not narrowing to the extent believed (Musu-Gillette et al., 2017; Paschall, Gershoff, & Kuhfeld, 2018). In other words, White and Asian students demonstrate achievement percentiles above Black and Hispanic students at every K-12 level throughout the United States (Musu-Gillette et al., 2017; Paschall, Gershoff, & Kuhfeld, 2018; Reardon, 2013). Factors contributing to academic disparities include student context and opportunity gaps (Alexander, Entwisle, & Olson, 2007; Flores, 2007; Herman, 2009; Park & Holloway, 2017; Wasserberg, 2017), inequitable allocation of fiscal and human resources (Desimone & Long, 2010; Jimenez-Castellanos, 2010; McMullen & Rouse, 2012; Morris &

Perry, 2016), bias (Ferguson, 2003; Kozlowski, 2015; Watanabe, 2008), cultural competency (Delpit, 1995; Ladson-Billings, 1994, 2000; Milner, 2006), teacher efficacy (Ashton & Webb, 1986; Bandura, 1986; Dembo & Gibson, 1985; Sleeter, 2001), and student efficacy (Bandura, 1986; Herman, 2009; Schunk & Pajares, 2009). These factors are important considerations as Tree Frog Elementary School (TFES; pseudonym) responds to its academic disparities, as measured by end-of-grade assessments. Approximately 75% of TFES students identify as students of color, and 10% are socio-economically disadvantaged, evenly distributed among racial subgroups; yet the combined reading and math proficiency for Black and Hispanic students (61.9% and 60.7%, respectively) is, on average, below the achievement of their White and Asian peers (85.1%, and 93.4%, respectively; North Carolina Department of Public Instruction [NCDPI], 2019). Thus, while TFES is highly diverse with low-SES risk, achievement data continue to reflect national, state, and local results (Musu-Gillette et al., 2017; NCDPI, 2019).

### **Theoretical Framework**

This literature synthesis utilizes Neal and Neal's (2013) networked ecological systems theory (EST) to organize the myriad of identified factors impacting or contributing to academic disparities between racial subgroups. Networked EST is a reexamination of Bronfenbrenner's (1979) original EST framework of nested systems where each level (chrono, macro, exo, meso, and micro) exists interdependently within the subsequent level to understand or describe a focal individual. Neal and Neal (2013) propose that, instead of having each system nested within the next, that each system connects to others through overlapping interactions directly or indirectly impacting the focal individual (see Figure 1.1).



*Figure 1.1: Tree Frog Elementary School example based on Neal and Neal's (2013) networked model of ecological systems. The macrosystem and chronosystems are external, contextual, factors and events that shape the illustrated social interactions.*

Use of either EST model supports the contextual nature, or setting, of academic disparities between racial subgroup factors explored within this literature synthesis (Neal & Neal, 2013). However, the networked model specifically addresses the social interactions that directly and indirectly connect one system to another, influencing the focal individual's experiences (Neal & Neal, 2013). The widely varied contextual factors identified in the problem of practice statement highlights the need to explore those factors through ecological systems defined by arrangements of interaction versus a nested model. The following literature synthesis, organized using Neal and Neal's (2013) networked model of EST, will ground the reader in an understanding of the influential (chronosystem and macrosystem) and setting (exosystem, mesosystem, and microsystem) factor interactions contributing to academic disparities between racial subgroups.

### **Educational Networks and Academic Disparities Between Racial Subgroups**

Social interactions between individuals or groups over time can promote or hinder changes within the context of focal individuals and is the hallmark of the chronosystem (Neal &

Neal, 2013). When these interactions over time are culturally-focused, including socio-economic status, race, and ethnicity, macrosystem influences develop the factors that inevitably form relationships between individuals and other networked systems (Neal & Neal, 2013). Reviewing factors influencing academic disparities between racial subgroups begins with an assessment of the race-based policies that developed those outcomes within school and student contexts alike.

### **Segregation and Outcomes**

A review of educational decisions within the United States that have influenced students of color for decades provided the initial context of factor synthesis focused on academic disparities between racial subgroups. Segregation, with its lack of access to quality education and negative stereotypes, defined as an oversimplified, undesirable, belief about a particular group, begins to describe the educational system interactions surrounding students of color contributing to racially disparate academic outcomes (Bifulco & Ladd, 2006; Orfield, 2013; Wasserberg, 2017).

The landmark Supreme Court decision, *Brown v. Board of Education* (1954) ordered school desegregation “with all deliberate speed;” however, investigations spanning decades document continued racial segregation across the United States and the resulting disparities between subgroups, even when accounting for SES (Coleman et al., 1975; Farley & Taeuber, 1974; Paschall et al., 2018; Roda & Wells, 2013; Taeuber & James, 1982). Current school segregation has roots in exclusionary housing practices, resulting in lower accumulated wealth within the community and, subsequently, reduced access to school programs such as magnet schools, high quality teachers, and education materials for students of color (Darling-Hammond, 2015; Jimenez-Castellanos, 2010; Orfield, 2013; Shapiro & Johnson, 2005). This cycle of racial inequality persists as White families continue to self-segregate their homes and capitalize upon

educational privileges for their children through enrollment at charter and private schools (Roda & Wells, 2013; Taeuber & James, 1982).

While research has demonstrated that students of color and low SES students demonstrate higher performance in desegregated settings, the continuation of housing discrimination for people of color and self-segregation of privileged families hinders lasting school integration efforts and perpetuates stereotypes associated with lower performance between racial subgroups (Landsman, 2004; Peterson, Rubie-Davies, Osborne, & Sibley, 2016; Watanabe, 2008; Wasserberg, 2017). Stereotyping marginalizes disadvantaged groups, such as people of color, and can develop a self-fulfilling negative reaction described as stereotype threat where, in education, the fear of confirming a specific group or race's negative stereotypes leads an individual to underperform (Steele & Aronson, 1995; Wasserberg, 2017).

### **Resources and Opportunities**

In Neal and Neal's (2013) networked EST, the exosystem is a setting where participants' directly or indirectly affect individuals connected to, but outside of, the system's social interactions. Educational leaders, along with state and local legislators, respond to and develop policies that directly influence school communities and, by extension, any academic disparities between racial subgroups (Jimenez-Castellanos, 2010; McMullen & Rouse, 2012; Watanabe, 2008). While students do not directly interact with exosystem individuals creating and interpreting educational policy, the subsequent resource allocations of time, money, and personnel may be tied back to those segregation and stereotype influences explored in previous networked systems (Jimenez-Castellanos, 2010; Neal & Neal, 2013; Owens, 2018; Paschall et al., 2018).

Education fiscal policies influence more than individual school budgets including, but not limited to, infrastructure, materials and supplies, school calendars, and personnel. For example, in his study of a southern California's intra-district resource allocation, Jimenez-Castellanos (2010) found that while White students attended schools receiving fewer total funds per pupil, they attended school facilities with personnel associated with higher levels of academic performance (consistent tenure and higher salaries). This is dissimilar from the TFES context which, while highly diverse, is quite affluent. More similar in context was McMullen and Rouse's (2012) North Carolina study of year-round (multi-track<sup>2</sup>), calendars and their impact on academic outcomes (McMullen & Rouse, 2012). The authors found that having a calendar organized in increments of 45 days in, 15 days out, provided no benefit or negative impact on achievement by racial subgroup (McMullen & Rouse, 2012). However, McMullen and Rouse (2012) did not analyze each *track* within year-round calendar schools; in this researcher's professional context the number of days in and out of school varies significantly for two of the four tracks in a multi-track school and may impact student achievement. For example, on track two, the first semester calendar has students in for 30 days, out for 15, in for 40, out for 19, in for 14, out for 10. Additionally, there is a county trend towards higher numbers of students with disabilities, higher students of color percentages, and reduced achievement levels on track two than experienced by the other three tracks.

These articles demonstrate that a variety of educational policy decisions at the school, district, and state levels may impact student outcomes between racial subgroups. Moreover, many academic resource policies defer to deficit thinking about how to narrow academic

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<sup>2</sup> Multi-track refers to different schedules students attend at a single school throughout an academic year. All students in the year-round school are assigned to one of four *tracks* that rotate in and out of the school so that only three attend at any given time.

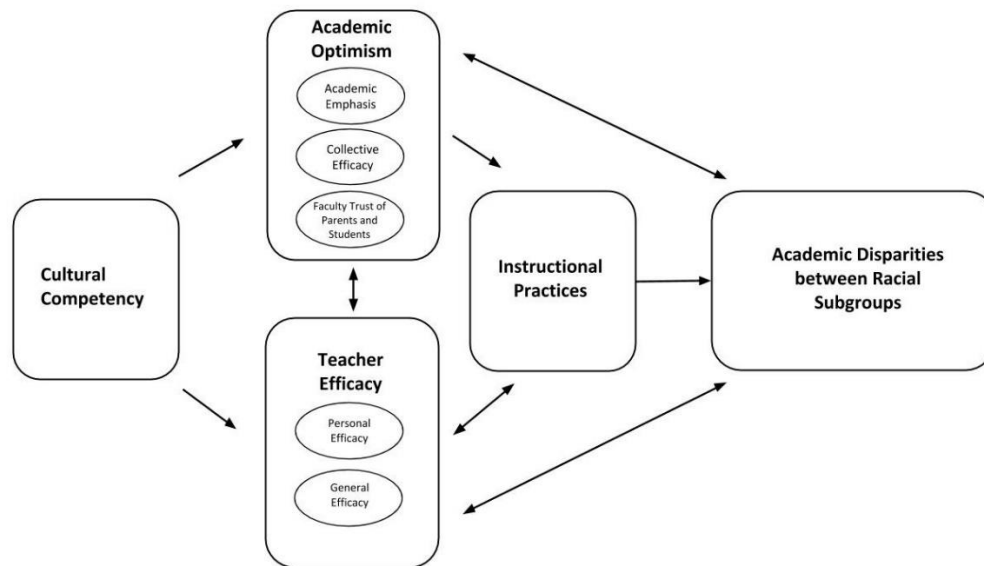
disparities between subgroups; that is to change the group rather than the equity of one's access to education through resource allocations (Darling-Hammond 2004; Jimenez-Castellanos, 2010; Ladson-Billings, 2007; Paschall et al., 2018). Subsequent discussions about educational resource connections to equity, and the ability of educators to effectively meet student needs, typically occur within and between individual school contexts.

### **Interactions at School: Student Contexts and Disparate Achievement**

The intersection of student contexts, such as home and school, signifies Neal and Neal's (2013) networked mesosystem, an aspect of ecological systems theory considering the interactions between individuals in different settings that affect a focal group. Reviewing connections between home and school reveals mediating factors that can increase or ameliorate disparities between learner subgroups (Park & Holloway, 2017; Serpell & Mashburn, 2012). Studies on teachers' beliefs regarding their individual and collective ability to effectively support any student, regardless of their background, are found throughout the literature as underlying causes of academic disparities including collective efficacy or the belief that a school's faculty can work together to positively affect student outcomes (Goddard, Hoy, & Woolfolk Hoy, 2000; 2004; Hoy, Gage, & Tarter, 2006).

Other collective beliefs that may positively or negatively impact student achievement includes faculty trust of parents and students where school staff demonstrate a willingness to be open to parents and students, knowing they are open and focused on the faculty's best interests (Bryk & Schneider, 2002; Hoy et al., 2006), and academic emphasis defined as the school-wide drive towards excellence in achievement (Hoy & Miskel, 2006; Hoy & Tarter, 1997; Hoy, Tarter, & Kottkamp, 1991). Hoy, Tarter, and Woolfolk Hoy's (2006) latent construct of a school's academic optimism develops from these three factors, a review of which, along with the

impact of teachers' cultural competency (Delpit, 1995; Ferguson, 2003; Kozlowski, 2015; Ladson-Billings, 1994, 2000; Milner, 2006; Watanabe, 2008), demonstrates the interaction of stakeholder contexts and their resulting relationships impacting student achievement. The conceptual framework in Figure 1.2 shows the relationships between each of these constructs.



*Figure 1.2: Conceptual framework demonstrating underlying factor relationships*

For the purpose of this literature review, this conceptual framework and the subsequent sections illustrate how academic optimism, with its underlying factors, is influenced by both teacher efficacy and cultural competency. Similarly, teacher efficacy is reciprocally influenced by academic optimism and cultural competency; all three constructs demonstrate direct impacts on academic disparities between racial subgroups.

### **Academic Optimism**

The school-wide constructs of collective efficacy, faculty trust of students and parents, and academic emphasis establish academic optimism as an underlying construct, related to student achievement (Bevel & Mitchell, 2012; Hoy et al., 2006; Malloy, 2012; Rutledge, 2010). Collectively efficacy, faculty trust, and academic emphasis are both individual constructs,



grounded in research, and interrelated where each can develop and reinforce the others, resulting in positive student outcomes (Brown et al., 2011; Hoy et al., 2006). When levels of academic optimism are low, there are more likely to be academic disparities between subgroups through the resulting school culture focused on reasons groups may not achieve versus a commitment to supporting each child (Brown et al., 2011; Hoy et al., 2006; Smith & Hoy, 2007).

Academic optimism was the theoretical framework for Brown et al.'s (2011) study of the connection between achievement and equity for all students at high performing elementary schools. The authors used a mixed-method approach, in two phases, to research how schools with varying achievement gaps differ in demographics, pedagogical practices, and school leadership (Brown et al., 2011). School with narrow differences between students were those with academic disparities of 15% or less between their White and minority students and noted by study authors as *small gap*; schools with wider discrepancies between subgroups recorded disparities greater than 15% and noted as *large gap* (Brown et al., 2011). The authors focused on 24 state-designated "honor schools of excellence," (p. 57) based on high proficiency, quantitatively analyzed to determine patterns of equity/inequity through an analysis of achievement and student demographics; the schools were then split into small gap and large gap categories based on the academic disparities between racial subgroups (Brown et al., 2011). Interviews and site visit protocols were developed using random sampling to visit eight of the small gap and eight of the large gap schools; the principal, an assistant principal, two teachers, and a parent participated in interviews, with sessions recorded and systematically analyzed using template analysis for themes related to the authors research question (Brown et al., 2011). Study limitations, such as principals choosing the other school interviewees and the interviewer's knowledge of each school's gap categorization prior to site visits, were noted by Brown et al.

(2011) with suggestions for future processes to assuage these concerns. Through their mixed-method study results, Brown et al. (2011) concluded that academic optimism, supported by small gap school leaders promoting student-centered teaching and learning, influenced student achievement for all subgroups; large gap schools demonstrated the inverse with higher levels of academic disparities between groups of students and lower levels of academic optimism within the school.

This was a well-developed and executed study that appears credible in its methodology, measures, and conclusion. Additionally, the authors note the uniqueness of the study's district noting that specific actions had been taken over years to ensure that schools are more demographically similar than not. These actions resulted, at the time, in elementary schools with student assignments with no more than 40% of the students qualifying for free or reduced lunch costs and that at least 75% of students were proficient on state end of grade standardized assessments (Brown et al., 2011). These criteria also ensured a more racially diverse population within each school (Brown et al., 2011). This is significant as this researcher works in the same district. While much of the intentional diversity has waned in the past ten years, this study provides the closest approximation to TFES's context and the potential impacts of academic optimism on academic disparities between racial subgroups.

While other academic optimism studies describing demographics analogous to TFES's have not been identified, Bevel and Mitchell's (2012) empirical research of 29 Alabama elementary schools confirmed that academic optimism has an ameliorative effect on student reading achievement above the effect of SES. Similarly, Boonen, Pinxton, Van Damme, and Onghena's (2014) Flanders study indicated positive associations between academic optimism and elementary student's math and reading outcomes. Developing or nurturing a climate of

academic optimism appears to mitigate poverty and prior achievement's effects on student outcomes (Bevel & Mitchell, 2012; Boonen, Pinxton, Van Damme, & Onghena, 2014; McGuigan & Hoy, 2006).

Since the development and confirmation of academic optimism as a school-level construct that impacts student achievement, researchers have further developed, tested, and confirmed academic optimism at the teacher and student levels (Beard, Hoy, & Woolfolk Hoy, 2010; Tschannen-Moran, Bankole, Mitchell, & Moore, 2013; Tschannen-Moran, Salloum, & Goddard, 2014; Woolfolk Hoy, Hoy, & Kurz, 2008). In these subsequent studies, researchers adapted or created tools to assess the three academic optimism variables (collective efficacy, trust, and academic emphasis) within each unit of measure. Within any focal group, many empirical studies connect academic disparities in student achievement with the wide variability within one or more of these constructs (Goddard, Hoy, & Woolfolk-Hoy, 2000; Goddard, Sweetland, & Hoy, 2000; Hoy, Gage, & Tarter, 2006). The following sub-sections will focus on the original school level variables that develop the latent academic optimism construct.

**Collective efficacy.** In education, collective efficacy refers to the beliefs of school staff in their organization's capability to positively affect educational outcomes (Goddard et al., 2000) and is grounded in Bandura's (1986; 1997) self-efficacy work within his social cognitive theory. Bandura (1986) noted that one's self-perception of their ability impacts what they do, the effort expended doing it, and the feeling of self-appraisal or -reprise. Bandura (1993) found that teacher's beliefs in a school's efficacy was just as influential on academic outcomes as their beliefs in their own abilities and was later supported in research focused on the development and validation of collective efficacy-specific measures (Goddard et al., 2000; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). In fact, studies demonstrated that collective efficacy accounts for

student achievement outcomes above the impact of socioeconomic factors and becomes an important signifier of school improvement (Goddard & Goddard, 2001; Goddard et al., 2000; Hoy, Sweetland, & Smith, 2002).

Authors Goddard, Skrla, and Salloum (2017) designed a recent, mixed methods study looking at the effect of collective efficacy on both academic achievement and narrowing academic disparities between racial subgroups termed *achievement gaps* within their paper. The quantitative measure was a previously validated collective efficacy scale found to be reliable in empirical studies (Goddard, 2002; Goddard, Goddard, Kim, & Miller, 2015). Qualitative focus groups were purposefully selected to provide information above and below the means for the quantitative means found in the final sample of 47 elementary and middle schools within an urban Texas district demonstrating narrowing academic disparities and an overall increase in student achievement (Goddard, Skrla, & Salloum, 2017). The authors found that, quantitatively, "...a one standard deviation in collective efficacy was associated with a 50% reduction in the academic disadvantage experienced by Black students (Goddard, Skrla, & Salloum, 2017, p. 229).

Qualitative findings noted participant patterns regarding high levels of academic press within schools with higher levels of collective efficacy (Goddard, Skrla, & Salloum, 2017). This is important as academic emphasis is one of the three factors of academic optimism and while this study focused on collective efficacy, teachers in high efficacy schools noted additional levels of academic focus, demonstrating the intertwined nature of each factor (Brown et al., 2011; Hoy et al., 2006). Additionally, Goddard and colleagues (2017) noted findings surrounding school leadership creating the conditions necessary for collective efficacy to thrive. This is in line with other studies that rest the implementation of collective efficacy with a school's leader (Brown et

al., 2011; Goddard, Skrla, & Salloum, 2017; McGuigan & Hoy, 2006). Thus, collective efficacy may be hindered when a school's faculty engages in teaching, learning, student outcomes, and/or leadership that question their competence (Goddard et al., 2000; Hoy et al., 2006; McGuigan & Hoy, 2006).

When collective efficacy is problematic, teacher beliefs in the school's faculty to affect student achievement weakens; as a result, teachers may decrease expectations for students due to a determination that they lack the capability to achieve at high levels (Tschannen-Moran & Barr, 2004). This lack of confidence in the capability of the faculty has been connected to schools where teachers do not, or are not asked to, provide input towards instructional decisions (Goddard, Hoy, & Woolfolk Hoy, 2004). Additionally, Klassen (2010) and Lim & Eo (2014) studied the impact of collective efficacy on teacher stress and found positive correlations; that is when stress is high, collective efficacy is lower and vice versa. Moreover, when collective efficacy was reduced, teacher stress was connected to student misbehavior (Klassen, 2010) and a greater belief that managing that behavior was outside their control (Gibbs & Powell, 2012).

**Academic emphasis.** Academic emphasis within a school occurs as stakeholders develop and communicate alignment towards high instructional standards to positively affect student achievement (Hoy & Miskel, 2006; Hoy & Tarter, 1997; Hoy et al., 2006; Hoy et al., 1991). Schools with a high level of academic emphasis believe in the capability of all staff to effectively meet student needs and the capability of all students to achieve high academic outcomes (Goddard, Sweetland, & Hoy, 2000; Smith & Hoy, 2007). Brown-Jeffy (2009) notes that this collective effort, or teacher collegiality, results in higher levels of academic emphasis (and therefore student achievement) because of better student-teacher relationships. Conversely, when academic emphasis is low, with less student-teacher interactions, academic emphasis measures

can predict lower levels of student achievement in reading and math even when controlling for race and socio-economic status (Barron, 2014; Benkovitz, 2008).

Goddard and colleagues (2000) used the Organizational Health Inventory for Elementary Schools having reviewed previous factor analytic studies (Hoy & Sabo, 1998; Hoy & Tarter, 1997; Hoy, Tarter, & Kottkamp, 1991) and found it to be a valid and reliable academic emphasis measurement tool. Teachers were asked eight items using a 6-point Likert scale ranging from strongly disagree to strongly agree; responses were aggregated to the school level to analyze this collective construct (Goddard et al., 2000). The study sample focused on 45 elementary school staffs (442 teacher respondents) in a midwestern urban district. While the demographics of the district vary from TFES (two-thirds qualifying for free or reduced lunch and 60% African American), between and within-school analyses not only confirmed higher levels of student achievement in schools with higher academic emphasis but concluded that results demonstrated positive effects for students of color and those socio-economically disadvantaged (Goddard et al., 2000). Considering TFES, where even a small population of students are experiencing academic disparities between racial subgroups, academic emphasis is a construct worthy of consideration to ensure that a climate of high expectations and student-teacher relationships around academic excellence exists.

**Faculty trust in parents and students.** The collective confidence in students *and* parents espoused by school staff defines the faculty trust construct; belief in both groups is essential as trust in one supports the other (Hoy et al., 2006). Indeed, researchers argue that an elementary teacher's trust in students emerges through their initial confidence in parents (Bryk & Schneider, 2002). Increased trust supports teacher-parent collaborations and a willingness to

work towards unique solutions towards disparities in student outcomes whereas *distrust* fosters a focus on determining another's motives (Brown et al., 2011; Hoy & Tschannen-Moran, 2003).

Hoy and Tschannen-Moran (1999; 2003) designed and validated subsets of the Omnibus Trust Scale to measure faculty trust in parents and students, a measure subsequently used, and found reliable, by Hoy and colleagues (2006). Adams and Forsyth (2013) utilized this subscale in their study to further test the main effect of faculty trust on student achievement (while controlling for prior achievement and socio-economic status). This measure was provided electronically to teachers at 56 urban elementary schools in a Southwestern district resulting in 1036 usable responses, a response rate of 68% (Adams & Forsyth, 2013). The authors confirmed the ameliorative effect of faculty trust of parents and students on academic achievement; however, they also note broad variability of the construct across the district (Adams & Forsyth, 2013). Vast differences in faculty trust of parents and students indicates vast differences in the educational experiences of families and any consequences associated with a lack of trust by those entrusted with the instruction of their children.

Bower, Bowen, and Powers (2010) investigated both sides of the teacher-parent trust relationship as an extension of Hoy et al.'s faculty trust in parents and students construct. Termed *family-faculty trust*, Bower and colleagues (2010) used an existing instrument, the Elementary School Success Profile, in use from eight elementary schools in two North Carolina districts (five focal schools in one district and three in the other) to measure this combined trust construct. Building on Hoy et al.'s work, the family-faculty trust construct sought to find a relationship between teacher levels of trust towards parents and any reciprocal levels of parent trust towards teachers and the school community (Bower et al., 2010). This study found that this relationship did exist and that parent educational involvement at home (such as talking about

school) was also associated with teacher's beliefs in their child (Bower et al., 2010). Again, and importantly, when faculty trust is problematic, the resulting distrust of parents and students is characterized by disengagement between faculty *and* families *from each other* and emerges as a response to blame or suspicion from one or more of these groups (Goddard, Tschannen-Moran, & Hoy, 2001).

Parent involvement is a contributing factor to student achievement; the lack of parent involvement may be seen by school staff as a lack of interest in student's education (Lee & Bowen, 2006; Park & Holloway, 2017; Yull, Blitz, Thompson, & Murray, 2014). A family's cultural capital, or knowledge of how to navigate the norms of a dominant culture, may be reduced when parents are not visible in the school setting (Jæger, 2011; Lareau, 2011). For example, in high poverty communities' parents may not be able to attend school events due to transportation or work. For families of color in these situations, the possible resulting teacher belief of parental disinterest (and thus reduced faculty trust in those families) would reflect the educator's bias and mistrust of that racial group (Hoy & Tschannen-Moran, 2003; Lee & Bowen, 2006; Tschannen-Moran, 2014; Yull et al., 2014).

### **Teacher Efficacy**

Bandura's (1977) self-efficacy framework explores how individuals develop a belief in their capability to reach a level of anticipated performance. Extended to instructional practices, teacher self-efficacy is the belief they can positively impact student outcomes (Ashton & Webb, 1986; Schunk & Pajares, 2009; Tschannen-Moran, et al., 1998) and, like collective efficacy, is grounded in Bandura's (1986; 1997) social cognitive theory. Two constructs of teacher efficacy present in the literature: personal teaching efficacy, or the belief a teacher has in their own ability



to affect an educational outcome, and general teaching efficacy, or the belief a teacher has in *any* teacher's ability to affect instructional change for any student (Ashton & Webb, 1986).

Sources contributing to teacher self-efficacy include vicarious experiences, social persuasion, physiological and emotional states, and mastery experiences (Bandura, 1977; Woolfolk-Hoy & Spero, 2005). Vicarious experiences, where someone demonstrates or models a skill, and social persuasion, where peer influences result in an individual's changed behavior, influence increases or decreases in teacher efficacy based on the corresponding positive or negative experience (Woolfolk-Hoy & Spero, 2005). Additionally, one's feeling of excitement or anxiety associated with physiological and emotional states may intensify the coordinating positive or negative experience and efficacy response (Woolfolk-Hoy & Spero, 2005). Mastery experiences provide the most powerful influence on teacher's perceptions of their ability with success or sense of failure corresponding with improved or decreased efficacy (Woolfolk-Hoy & Spero, 2005).

Teacher efficacy literature describes the cyclical and reinforcing nature of self-efficacy experiences (Bruce et al., 2010; Dembo & Gibson, 1985; Goddard & Kim, 2018). For example, Bruce et al.'s (2010) comparative study on the effect of professional learning on teaching efficacy found that as teachers applied the learned instructional behavior and saw improved student learning, they perceived a mastery experience followed by improved efficacy that led to additional application of the professional learning. A reverse cycle could occur if an attempted skill or strategy did not go well, resulting in reduced student outcomes, a sense of failure and lack of mastery may follow and lead to a decreased sense of a teacher's efficacy (Bruce et al., 2010; Gibson & Dembo, 1985; Goddard & Kim, 2018).

When considering the context-specific efficacy experiences of TFES teachers, the question of school location and socio-economic status should be considered. Page, Pendergraft, and Wilson (2014) focused on these variables in their study investigating teacher efficacy at three elementary schools connected through a university partnership. One school was located in an urban community with a 91% free and reduced lunch rate (FNR), the second school represented a 64% FNR suburban context, and the third a rural, 64% FNR, elementary school (Page et al., 2014). Using Tschannen-Moran and Woolfolk-Hoy's (2001) Teacher Self Efficacy Scale (TSES), the researchers invited 114 teachers from these three schools to complete the survey to determine if there was any difference between schools, respondents' years of experience, and/or the grade level taught. A total of 67 teachers (58.7%) completed the survey. Correlation analysis found significance between the demographic type of school (rural, urban, etc.) but not between other variables. Importantly, teachers at the urban elementary had the lowest levels of self-efficacy and the school demonstrated the highest level of student diversity with 79% African American and 3% White (Page et al., 2014). While this is a very different context from TFES, the lower mean scores of urban-school teachers with the higher levels of diverse students demonstrating lower academic achievement (the urban school was the only one of the three to not make adequate yearly progress; Page et al., 2014) mirrors the problem of academic disparities between racial subgroups experienced by TFES students.

Teacher behaviors in the classroom have been reported to align with levels of teacher efficacy (Gibson & Dembo, 1985). High-efficacy teachers are more likely to instruct students in whole groups and lead them to understanding through questioning whereas lower-efficacy teachers are observed teaching more small group lessons and more likely to provide direct answers to student questions (Gibson & Dembo, 1985). Surveying pre- and in-service teachers,

Sleeter (2001) found higher levels of pre-service teacher efficacy towards teaching African American students that declined once they began teaching full time. While reduced teaching efficacy towards African American or Black students may be a result of inadequate beginning teacher support, lack of professional development, a result of negative vicarious experiences, or social persuasion (Sleeter, 2001; Woolfolk-Hoy & Spero, 2005), the result is not only lowered teacher efficacy, but a belief that may additionally impact their cultural competency.

### **Cultural Competency**

There are a variety of definitions for cultural competence across professional disciplines. For example, in healthcare, cultural competence focuses on the knowledge and dispositions that facilitate an understanding of socio-cultural factors necessary for effective communication and interactions with others (Horevitz, Lawson, & Chow, 2013). A recent article described cultural competency within the field of social work as “a combination of knowledge and skills employed by professionals to understand minorities’ views” (Feize, & Gonzalez, 2018). Finally, Dietz et al., (2017) investigated and operationalized *multicultural* competence as awareness of cultural identities including the health, social, and political factors impacting non-dominant individuals.

In the field of education, a similar variety of definitions and terms are used interchangeably to describe cultural competency. Byrd and Olivieri (2014) discussed how some education research focused on cultural competency is focused on the divide between the teacher’s and the student’s respective cultures. These colleagues developed a four-part definition of cultural competence for education including “...accepting and appreciating diversity among students” (Byrd & Olivieri, 2014, p. 56). Similarly, Brace (2011), thoroughly reviewed cultural competence definitions in the literature and utilized definitions that are focused on the student-teacher relationship. While the educational relationship between teacher and student is important,

this researcher contends that cultural competence is not developed in education for teachers to solely access when they enter a classroom with diverse students. Instead, for this education-based study, cultural competence is focused on all individuals, regardless of their profession, and refers to how one sees oneself as an intersection of multiple identities, and how that understanding results in responses to those different than themselves (Johnbull, 2012; Mayfield & Garrison-Wade, 2015; Sevig, Highlen, & Adams, 2000).

**Cultural competency and student outcomes.** Even before a child begins school, their home context imparts social, cultural, and societal interactions informing their identity and response to others (Herman, 2009; Lareau, 2011). Herman's (2009) study established influences on student's racial identities as societal factors that may positively or negatively impact student achievement through one's identification of self within a context and any associated stereotypes. In Neal and Neal's (2013) microsystem, or individual, level, the development of an individual's racial identity resides in the family and peer interactions within the home/neighborhood setting (Herman, 2009). When identity development separates home and school interactions, cultural enrichment lacks within the community and culturally responsive instruction lacks within the school (Yull et al., 2014).

Once at school, students' educational experiences develop from influential interactions within the building. Learning activities, and by extension a student's opportunity to learn, depends on a teacher's instructional design and employed strategies (Ertmer & Newby, 2013; Schunk, 2012). Brace (2011) sought to determine the relationship between cultural competency of teachers and the achievement of their students attending urban elementary schools in the southeastern United States. Using a mixed method design, Brace (2011) collected quantitative data through the Professional and Personal Beliefs About Diversity scale and qualitative through

semi-structured interviews. Study findings indicated that there was not statistical significance between the teacher's beliefs about diversity and their student's standardized test scores, including disaggregated analysis by race/ethnicity (Brace, 2011). Qualitative findings found a positive cultural competency connection between teachers and students through relationships (Brace, 2011). This resonates with positive vicarious and mastery experiences (Bandura, 1986) teachers have with their students influenced through increases in cultural competence. However, for students where relationships are not occurring with teachers, or the relationships are not positive, academic disparities between racial subgroups may result through a lack of engagement, high expectations, or responsive teaching practices (Ladson-Billings, 1994, 2000, 2006; Sampson & Garrison-Wade, 2011).

The mesosystem interaction of home and school explores teachers' cultural competency which, when present, should result in culturally relevant teaching practices (Mayfield & Garrison-Wade, 2015; Sampson & Garrison-Wade, 2011). The absence of CRT ignores students' unique learning needs and interests and may result in disparate academic outcomes between racial subgroups (Ladson-Billings, 1994, 2000; Mayfield & Garrison-Wade, 2015). A teacher's implementation of culturally competent instruction, and intentionally working to support equitable learning outcomes for all students, is likely couched in their sense of efficacy.

**Culturally responsive teaching.** Culturally responsive practices are often seen as a method of meeting the needs of diverse learners; this premise was the focus of the following study on understanding the genesis of narrowed academic disparities between racial subgroups at a western state middle school (Mayfield & Garrison-Wade, 2015). The researchers developed a framework focused on a variety of factors indicating culturally responsive practices including school leadership, parent engagement, and shared beliefs (Mayfield and Garrison-Wade, 2015).

Data collected through audio-recorded interviews and focus groups, from 27 staff volunteers, along with classroom observations, were qualitatively analyzed using *constant comparative coding analysis* (Mayfield and Garrison-Wade, 2015). In addition to confirming expected factors positively impacting culturally responsive practices, ongoing professional development in cultural *competency* emerged as a necessary component of culturally responsive practices in the focal school (Mayfield and Garrison-Wade, 2015). This study highlights the need for explicit cultural competence training in order to have the requisite skills to access and provide the instructional practices necessary to meet the needs of diverse learners.

Ladson-Billings (2001) described cultural competency as an integral part of educators' effectively providing culturally relevant pedagogy (CRP) through a process of honoring student beliefs and supporting the learning of their and other's culture, including race. However, the crux of Ladson-Billings' (2001) original focus on culturally responsive instruction was for students to understand and draw upon their own cultures; Brace (2011) notes that Ladson-Billings "briefly discussed the idea of cultural competence as it related to teachers, and gave indicators of cultural competence on the part of the teacher" (p. 61). These indicators, including drawing upon culture for learning activities, understanding the home and community of students (Brace, 2011; Ladson-Billings, 2001) do not explicitly ask teachers to think about *their own* identity and how their interactions with students may be connected to their individual beliefs.

Milner (2017) researched studies connecting academics and CRP and found that race was limited in what was being considered culturally responsive instruction. Similarly, Little and Tolbert (2018) recommend culturally relevant teaching (CRT) practices as a method of engaging and supporting diverse learners, especially Black boys. While implicit bias is noted as something to be corrected, it is suggested that CRT is the way to do so without a discussion cultural

competency as a related factor (Little & Tolbert, 2018). Other recent CRT studies connect cultural responsiveness to improved behavior outcomes (Bradshaw et al., 2018; Larson et al., 2018). Interestingly, both Larson et al. (2018) and Bradshaw et al.'s (2018) CRT studies focused on social desirability bias, or survey respondents' answering based on believed correct answers when self-assessing, versus implicit bias. It appears the researchers chose not to measure implicit bias as a basis for CRT. Based on the understanding that implicit bias is an underlying factor of cultural competency (see conceptual framework, Figure 1.1, above), and one's cultural competence is necessary for CRT, additional exploration of the implicit bias/CRT relationship is warranted.

**Implicit bias.** In education, teachers' implicit or explicit negative responses to those differences--typically of their students of color--may result in biased learning environments (Ferguson, 2003; Kozlowski, 2015; Watanabe, 2008) and instruction that ignores cultural interests or backgrounds (Ladson-billings, 2000; Sampson & Garrison-Wade, 2011; Mayfield & Garrison-Wade, 2015). Additionally, teacher bias may further demonstrate reduced trust with students and parents (Park & Holloway, 2017; Scott, Gage, Hirn, & Han, 2018), and lowered expectations for students of color resulting in academic disparities between racial subgroups (Jacoby-Senhor, Sinclair, & Shelton, 2016; Lubinski, 2002). These types of teacher behaviors often reinforce stereotype threat reactions in students of color and thus cycle to substantiate the implicit bias, or unconscious beliefs about others, held by educators with lower levels of cultural competence (Kozlowski, 2015; Mayfield & Garrison-Wade, 2015; Scott et al., 2018; Wasserberg, 2017).

As an unconscious belief, teachers likely do not recognize the impact of their implicit biases on their teaching quality. Jacoby-Senhor, Sinclair, and Shelton (2016) posited that White

teacher's implicit biases towards Black students would result in anxiety-induced poor instruction and thus lower student test performance. Two studies were developed to investigate this hypothesis. The first study took a mixed methods approach with participant surveys to measure implicit bias and explicit prejudice, assessments to measure lesson proficiency, and video coding to measure teaching quality and anxiety (Jacoby-Senhor et al., 2016). Participants were paired and took part in a session where one member (White) was provided the role of instructor and the other (White or Black) was the learner (Jacoby-Senhor et al., 2016). White instructors first completed a subliminal priming task, described by Jacoby-Senhor et al. (2016) as measuring implicit racial bias without appearing to focus on prejudice, followed by 18 minutes (determined from procedural pretesting) to prepare a lesson with provided materials. The videotaped lesson was provided to the paired participant and followed by an additional five minutes for unstructured discussion (Jacoby-Senhor et al., 2016). Participants then separated while the learner completed a test of the lesson and the instructor completed a measure of explicit bias (Jacoby-Senhor et al., 2016).

In the second study, a sample of participants watched the study one videos followed by the same lesson assessment provided to the face-to-face learners to confirm the effectiveness, or lack thereof, of the instructor's lesson (Jacoby-Senhor et al., 2016). The authors describe findings consistent with their hypotheses: greater implicit bias in White teachers is associated with increased anxiety and a decreased ability to deliver clear instruction to Black learners (Jacoby-Senhor et al., 2016). Additionally, lower teaching quality as a result of implicit bias is not helped nor hindered by the teacher's explicit prejudice which also predicted lower learner performance (Jacoby-Senhor et al., 2016). Thus, implicit biases, identified as an underlying factor of cultural competence (Mayfield & Garrison-Wade, 2015), is an example of how



macrosystem influences, such as stereotyping, may influence the mesosystem interactions between student contexts (Neal & Neal, 2013).

The racial identity of an individual's environmental *context* also develops macrosystem influences on the relationships impacting their social interactions. Herman (2009) proposes a racial context theory as an explanatory model of academic achievement and growth—or the lack thereof—of all students, both monoracial and multiracial. The author proposed that multiracial students with Black or Hispanic ancestry, or those who self-identify as Black or Hispanic, experience lower achievement than those who identify as White or Asian (Herman, 2009). Herman (2009) further hypothesized that academic performance has a strong association to ethnic identity, and that the racial context a multicultural student experiences outside of school is a significant factor in explaining academic performance.

Herman (2009) tested these hypotheses against her racial context theory and three others: status attainment (defined as the position one holds in society; Blau & Duncan, 1967), oppositional culture (Ogbu & Davis, 2003), and educational attitudes (Herman, 2009). The study's context focused on seven high schools located in northern California and Wisconsin with a final sample comprised of 5117 students who completed two years of surveys administered in classrooms twice a year over a span of three years (Herman, 2009). Each of the four theories were tested using multilevel modeling to predict student achievement over time (Herman, 2009). The author concluded that the contexts students live in and experience daily (peers, family, school, neighborhood) are important factors in student achievement and noted, “the Whiter the context, the higher the achievement” (Herman, 2009, p. 36).

By expanding the problem of disparate achievement between racial subgroups to the self-identification of students to a particular race, Herman (2009) underscores a macrosystem

influence of racial contexts, with their associated stereotypes, to any individual. In fact, the impact of implicit biases and stereotype threat may explain academic disparities found in more diverse and high-SES contexts which are usually favorable to increased academic outcomes for marginalized subgroups (Kozlowski, 2015; Mayfield & Garrison-Wade, 2015; Paschall et al., 2018; Watanabe, 2008). As implicit bias is an underlying factor of cultural competency and, as shown by Herman (2009), connected to individual identity, the connection of identity to cultural competency merits exploration.

**Self-identity and cultural competency.** The previous synthesis of cultural competency and implicit bias literature demonstrates how cultural competence is often used interchangeably with a variety of phrases within the literature. In order to operationalize cultural competency, this researcher utilized Myers et al.'s. (1991) optimal theory applied to identity development (OTAID) model which works to acknowledge the numerous identity aspects individuals hold and respond to within the identity development process. The OTAID stages of development (see Appendix A) provides a continuum of growth an individual may experience as they become aware of the different responses—positive or negative—various identities experience within society (JohnBull, 2012; Myers et al., 1991; Sevig, Highlen, & Adams,2000). Sevig, Highlen, and Adams (2000) developed and validated their Self-Identity Inventory (SII) survey based on the OTAID to measure stages of identity development. For the purposes of this study, measuring cultural competency will refer to the OTAID continuum. Thus, implicit bias and CRT literature points to the need for each educator must first to conduct an internal review of their beliefs and develop an understanding of the implicit bias that underlies their individual levels of cultural competency in order to effectively *implement* CRT practices and meet the needs of all learners.

### **Summary**

Teacher-student interactions highlight teacher efficacy and cultural competency constructs impacting school cultures, teachers' instructional decisions, and students' disparate academic outcomes. A host of race-based factors influence these outcomes for students of color including ongoing segregation, stereotypes and the associated stereotype threat, racial contexts, and the education policies impacted by the effects of these factors (Darling-Hammond, 2015; Herman, 2009; Jimenez-Castellanos, 2010; Orfield, 2013; Shapiro & Johnson, 2005). However, once in the classroom, students' outcomes are directly related to *teachers'* responses to race-based factors (Scott et al., 2018; Sebastian, 2017; Vaught & Castagno, 2008). Teachers' instructional practices, argued to be the most important factor in student outcomes, vary in their effectiveness with students of color (Brace, 2011; Gershenson, Holt, & Papageorge, 2016; Hattie, 2012; Peterson et al., 2016). When investigating an affluent and diverse school like TFES, a lack of collective and/or teacher efficacy, trust in parents, and cultural competency among teachers appear to be more significant factors of academic disparities between racial subgroups than inequitable access to resources or racial segregation. If salient within the TFES context, these are actionable factors that may ameliorate academic disparities between racial subgroups (Brown et al., 2011; Mascal, Leithwood, Strauss, & Sacks, 2009; McGuigan, & Hoy, 2006; Smith & Hoy, 2007; Tschannen-Moran et al., 2014). For these reasons, teacher efficacy, cultural competency, and the three factors of academic optimism—collective efficacy, faculty trust in parents and students, and academic emphasis—were selected for further exploration, through a needs assessment, to address the problem of practice.

## **Chapter 2 Needs Assessment**

The chapter one literature review revealed that academic disparities between racial subgroups is not a problem of practice confirmed by any one indicator. Over decades, across states, and throughout a myriad of demographic contexts, students of color experience the results of systemic inequities as an academic outcome (Darling-Hammond, 2015; Herman, 2009; Ladson-Billings, 2007; Musu-Gillette et al., 2017). Often, schools with a lower percentage of White students and a higher percentage of socioeconomic need are highlighted as reasons for reported academic disparities between White students and their Black and Hispanic peers (Musu-Gillette et al., 2017; Paschall, Gershoff, & Kuhfeld, 2018; Reardon, 2011; 2013). This does not, however, explain the same academic disparities found at highly diverse and affluent schools, such as TFES. The previous chapter identified teacher and school-based constructs as factors influencing academic disparities between racial subgroups when racial segregation and equitable access to resources are less prevalent. Thus, the purpose of this study is to assess the extent to which teacher efficacy, cultural competency, and the three factors of academic optimism—collective efficacy, faculty trust in parents and students, and academic emphasis—vary in this context as they do in the literature.

### **Context of the Study**

Tree Frog Elementary opened July 9, 2019, with 90 percent of students reassigned from three nearby schools (School A, School B, and School C). These schools have high percentages of racial diversity (approximately 70%, 80%, and 60% students of color, respectively), high to mid-Socioeconomic Status (SES; 8.4%, 8.6%, and 21.9% of students receive free or reduced lunch prices, respectively), and differences in subgroup achievement by race (NCDPI, 2018). As

a result, TFES opened as a very similar context to these schools in demographics (highly diverse with approximately 10% SES) and initial achievement (NCDPI, 2019).

The demographic make-up of TFES and its aggregated student achievement outcomes are very similar to the researcher's previous context where years of professional development, instructional observations, and staff surveys indicated cultural competency and teacher efficacy as potential teacher-level factors contributing to differences in academic outcomes for students of color. School-wide, a focus on collective efficacy, faculty trust of parents and students, and academic emphasis—the components of Hoy, Tarter, and Woolfolk Hoy's (2006) academic optimism framework—may additionally describe the school environment with one or more of these combined constructs aggravating or mitigating those at the teacher level and, by extension, impacting student outcomes.

### **Purpose of the Study**

The purpose of this study is to determine the saliency of potential factors contributing to academic disparities between racial subgroups at the three schools providing the majority of students to TFES. The leadership expectations, teacher beliefs, and student outcomes from each context may inform the initial culture of TFES based on the previous experiences of the aggregated community. Limited research on new schools exists and, where it does, the focus is on advice or problems associated with new school development (Ryan, 2010). A related topic, transition of staff and students to a new school setting, is more prolific detailing the existing cultural information that is carried from a previous to a new context (Gotcher, 2017) and the resulting student achievement impact that may occur (Lester & Cross, 2015).

This study focused on developing a holistic picture of the academic and climate backgrounds of these three schools from the perspective of teachers and principals. To support

an understanding of incoming TFES students' prior experiences, this study sought to determine any achievement disparities between racial subgroups, and understand the perceptions of cultural competency, teacher efficacy, and academic optimism from each sending school. This information provided TFES school leadership with data to open the school acknowledging disparate achievement between racial subgroups from day one, instead of waiting for end of year standardized test results. Finally, analysis of each construct supported further investigation of interventions on the most actionable factors impacting TFES student outcomes.

### **Research Questions**

The following questions guided this study to describe the focal schools' perceptions of principals and teachers:

RQ1. What is the overall and racial subgroup proficiency (combined math and reading of 3rd - 5th grade students) and growth from each school? Are there disparities within each focal school?

RQ2. How does each school's teachers perceive their personal and general teaching efficacy?

RQ3. How do principals and teachers describe a climate of academic emphasis?

RQ4. What are the principal and teacher perceptions of faculty trust in parents and students?

RQ5. What is each school's state of collective efficacy?

RQ6. What are principals' and teachers' perceptions of their cultural competency?

### **Methods**

This study employed a convergent parallel mixed method design (Creswell & Plano Clark, 2011) to integrate and analyze data from concurrently collected quantitative and

qualitative data from three focal schools. Mixed methodologies merge quantitative and qualitative data to compare/analyze as an amalgamated whole (Teddlie & Tashakkori, 2003). A convergent parallel design analyzes quantitative and qualitative data separately (parallel) before being merged and analyzed as an integrated whole (Creswell & Plano Clark, 2011). This methodology was chosen to effectively utilize multiple types of data (researcher collected qualitative and quantitative data along with existing quantitative) to answer the research questions. Data were collected without consideration of the impact of one set on the other (qualitative data were not collected to explain the quantitative, for example) and, as a result, the final mixed analysis is merged based on specific elements or themes from the quantitative and qualitative analyses; these findings are then compared through a joint display (Creswell & Plano Clark, 2011). This final analysis provides a greater understanding of the focal schools as described in the study's purpose and research questions.

### **Instrumentation**

Each construct identified within the research questions was operationalized with an identified instrument, and corresponding source (see Table 1.1). Each measure is further described in the following subsections.

**Existing school proficiency and growth data.** North Carolina end of grade and end of course proficiency and growth data are publicly available on the Department of Public Instruction's website (NCDPI, 2018). These data are presented as school aggregates and disaggregated by various student subgroups such as race, socioeconomic status, and student identification as academically gifted, as an English language learner, or as a student with a documented disability.

Table 1.1  
*Operationalization of constructs*

Construct	Conceptual Definition	Instrument	Citation	Measure Operationalization
Race/Ethnicity	Identification by a person to a specific group noted by physical features or geographic heritage	2017-18 School assessment and other indicator data [Data file]	NCDPI, 2018	Indicators of race/ethnicity
Proficiency	Performance on NC end of grade (EOG) assessments	2017-18 School assessment and other indicator data [Data file]	NCDPI, 2018	Scores on NC end of grade (EOG) assessments by achievement level and proficiency standard (Level 3 and above)
Academic Growth	Increasing knowledge by one year as indicated by the Education Value-Added Assessment System (EVAAS)	2017-18 School assessment and other indicator data [Data file]	NCDPI, 2018	Value-added growth index divided into the following categories: > 2.00 = Exceeded 1.99 to -2.00 = Met < -2.00 = Not Met
Cultural Competency	An individual's understanding of their identity and subsequent belief in and response to the differences of others including an awareness of the systemic oppression towards those outside the institutional majority	Self-identity inventory (survey – selection of 3 items from each of 5 subscales) Principal Interview Schedule	Sevig, Highlen, and Adams, 2000 Brown et al., 2011	Five subscale composite means consisting of three items per subscale  Interview transcripts analyzed through In Vivo coding of a priori themes
Teacher Efficacy (Personal and General)	A teacher's belief that they, or other educators, can positively affect the learning of any student	Teacher Efficacy Scale (shortened version)	Gibson and Dembo, 1984	Two subscales composite means consisting of seven of items per scale
Collective Efficacy	The school faculty's belief that they can positively affect student outcomes	Collective Efficacy Scale (short version)	Goddard, Hoy, and Woolfolk Hoy, 2000.	Subscale composite mean consisting of 14 of items
		NC TWC Survey	NC TWC, 2018	Percent agree/strongly agree of items 9.1.m and 9.1.n
Faculty Trust in Students and Parents	A school faculty's belief that they are supported and seen as capable by students and parents	Omnibus Trust Scale	Tschannen-Moran and Hoy, 2003	Subscale composite mean consisting of seven of items
		Principal Interview Schedule	Brown et al., 2011	Interview transcripts analyzed through In Vivo coding of a priori themes
		NC TWC Survey	NC TWC, 2018	Percent agree/strongly agree of items 4.1.f and 4.1.g
Academic Emphasis	The focus of high standards, hard work, and student achievement within a school by both faculty and students	Organizational Health Inventory (academic emphasis subscale)	Hoy and Miskel, 2006; Hoy and Tarter, 1997.	Subscale composite mean consisting of six of items
		Principal Interview Schedule	Brown et al., 2011	Interview transcripts analyzed through In Vivo coding of a priori themes
		NC TWC Survey	NC TWC, 2018	Percent agree/strongly agree of items 9.1.k and 9.1.l

**Existing school climate data.** The 2018 NC Teacher Working Conditions (TWC) Survey is provided by the state every two years and has multiple items within a variety of topics



influencing school climate. Using the conceptualized definitions of factors within the academic optimism construct, the researcher analyzed items within the TWC survey and identified two within “community support and involvement” aligned with the faculty trust of parents and students, and two each within the “instructional practices and support” section aligned to academic emphasis and collective efficacy (NC TWC, 2018).

**Principal interviews.** An eleven-item qualitative interview protocol adapted from Brown, Benkovitz, Muttillio, and Urban’s (2011) protocol focused on academic optimism (see Appendix B). Additional items were developed by the researcher to support understanding of the principal’s perceptions of their school’s cultural competency. Example items include *How do you define excellence for teachers and students; what are your, “look-fors”?* (Brown et al., 2011) and *Describe the ways your school is working to meet the needs of diverse learners*, developed by the researcher.

**Teacher survey.** A 56-item Qualtrics survey was developed to measure teachers’ perceptions from the three participant schools. The instrument included requests for demographic information followed by items from existing survey subscales demonstrating validity and reliability measuring teacher- and school-level perceptions from each of the identified constructs (see Appendix C).

**Cultural competency.** Cultural competency items were captured using an abbreviated form of Sevig, Highlen, and Adams’ (2000) Self-Identity Inventory. This instrument was developed by the authors using Myers et al.’s. (1991) optimal theory applied to identity development (OTAID) model (Appendix A). Sevig, Highlen, and Adams’ (2000) resulting Self-Identity Inventory was developed to measure “worldview and multicultural identity development” (p. 177) and validated against other measures such as the belief system analysis scale. OTAID levels were also referenced when analyzing RQ6 qualitative data; each principal’s

perceptions of their school's cultural competency (theme) used the following a priori deductive codes: a) *personal*, which aligns to OTAID stages one and two, b) *interpersonal*, aligned to stages three and four, and, c) *institutional* (stages 5 and 6; JohnBull, 2012).

***Teacher efficacy.*** As described in chapter one, two types of teacher efficacy—personal and general—are supported by Bandura's (1986; 1997) social cognitive theory. Gibson and Dembo (1985), developed and tested a survey to measure both constructs of teacher self-efficacy theory (Ashton & Webb, 1986). This instrument was investigated by multiple scholars (Soodak & Podell, 1996; Tschannen-Moran & Woolfolk Hoy, 2001) and continues to reflect both the internal, or personal, and external, or general, aspects of the teacher efficacy construct.

***Collective efficacy.*** Collective efficacy is the school-level equivalent to self-efficacy with its conceptualization grounded in Bandura's (1986; 1997) social cognitive theory. Collective efficacy represents the shared opinions of a group about the ability of their organization to achieve (Goddard, Hoy, Woolfolk Hoy, 2000). In order to measure this construct, Goddard, Hoy, and Woolfolk Hoy (2000) developed and tested the collective efficacy scale. This instrument was based on Gibson and Dembo's (1986) teacher efficacy scale with individualized (*I*) item statements transitioned to group (*teachers*) focused questions. After field testing and a pilot survey of the initial instrument, validity was confirmed with revisions to any identified weaknesses within the measure (Goddard, Hoy, Woolfolk Hoy, 2000). The second iteration was used in an urban elementary study where validity was again confirmed along with high internal reliability (Goddard, Hoy, Woolfolk Hoy, 2000).

***Faculty trust of parents and students.*** Three subtests comprised the omnibus trust scale: client, colleagues, and principal (Hoy, Gage, & Tarter, 2006). Faculty trust for all these factors is a measure of staff beliefs regarding the positive intentions of the specified group (Hoy, Gage, &

Tarter, 2006). Hoy and Tschannen-Moran (2003) validated this instrument through a series of analytic studies with reliability being consistently high for each subtest. In McGuigan and Hoy's (2006) investigation, the Cronbach's alpha coefficient was .96. For this study, only the client (parents and students) subtest items were included in survey.

***Academic emphasis.*** Defined as the viewed importance held by a school regarding academic excellence, academic emphasis is measured using eight items from the Organizational Health Inventory for Elementary Schools (Goddard et al., 2000). The authors expanded the original instrument to improve reliability (alpha coefficient = 0.92). Evidence of the instrument's validity had been demonstrated in three previous studies (Goddard et al., 2000; Hoy & Sabo, 1998; Hoy & Tarter, 1997; Hoy, Tarter, & Kottkamp, 1991).

### **Qualitative Data Collection**

Each principal was contacted via email with an overview of the interview purpose and invitation to participate. All three principals (100%) agreed to a one-on-one interview. A convenient time was decided between the researcher and each principal. At the start of each interview, the IRB consent form was presented in full, with an additional opportunity for the principal to opt out. Each principal signed the consent form and was offered a copy for their records along with a reminder that they could stop the interview at any time. To protect their identities, each principal was randomly assigned a gender and other demographic information was omitted.

Principal B's interview occurred first. The interview occurred in his office and lasted 48 minutes with the interview questions in sight as the interview was conducted. Principal C was the second to interview and asked to see the interview questions ahead of time. The interview protocol was provided to Principal C approximately 18 hours before our scheduled interview

where Principal C noted that she, “really did not have time to think deeply about the questions.” The interview lasted 26 minutes and, due to a scheduled meeting, needed to be continued 6 days later for an additional 13 minutes. The final interview with Principal A lasted 35 minutes with the questions in sight as the interview was conducted. All qualitative data were securely recorded, transcribed, and analyzed to identify themes within each construct.

### **Quantitative Data Collection**

Two forms of quantitative data were utilized to answer the research questions. Existing data was used to describe each focal school’s 2018 climate and student achievement and collected survey data was used to describe teacher efficacy, cultural competency, and climate-specific teacher beliefs.

**Existing Data.** Publicly available quantitative data for each focal school provided teacher belief and student outcome data to fully describe each community. Student outcomes were described through analysis of the 2018 North Carolina Department of Public Instruction (2018) end of grade test proficiency, disaggregated by racial subgroup. A comparison of the 2016 and 2018 NC teacher working conditions survey (2018) results illustrated teacher beliefs, aligning specific TWC survey items to one of the following three constructs: collective efficacy, faculty trust in parents and students, and academic emphasis. Together, these factors form a latent construct: academic optimism (Hoy, Tarter, & Woolfolk Hoy, 2006). These data were used to triangulate, or validate with additional evidence (Lochmiller & Lester, 2017), each principal’s qualitative perceptions, and teachers’ quantitatively reported beliefs.

**Survey.** The 56-item survey was provided to in-service teachers at each of the focal schools. The instrument used a six-point Likert scale ranging from strongly disagree to strongly agree (see Appendix C). Survey items were transferred into Qualtrics, an online survey platform,

in a random order to prevent respondents from answering in a similar manner based on familiarity with question topic (C. Eith, personal communication, February 2019). Teachers opting to complete the survey responded to items focused on collective efficacy, faculty trust of parents and students, academic emphasis, teacher efficacy, and cultural competency. Statistical Package for the Social Sciences (SPSS) software supported the descriptive statistical analysis of collected survey data (Wagner, 2017).

All certified teaching staff at each of the three focal schools were contacted by email with an offer to participate in a survey supporting an understanding of teacher beliefs. Each of the principals who participated in the one-on-one interviews were consulted for their school's participation and agreed. Principal C asked me, as the researcher, to send the survey while attending a School C faculty meeting. The researcher was clear to explain that the survey was completely optional, and that while Principal C would receive her school's data, she would not know who responded and who did not. The electronic survey was sent to all three schools on May 22<sup>nd</sup>, 2019, with reminder emails sent May 29<sup>th</sup> and June 3<sup>rd</sup>, before closing on June 5<sup>th</sup> 2019.

Surveys were sent to 186 certified teachers and 114, or 61% submitted the survey. A total of 40 respondents were omitted from analysis due to incomplete data resulting in a 40% completion rate. Participants received informed consent notification when they accessed the survey link. Evidence of their consent to participate occurred as teachers selected *yes, begin* or *no, end* after reading the following statement before accessing the survey: "By completing this survey or questionnaire, you are consenting to be in this research study. Your participation is voluntary, and you can stop at any time."

Upon completion of the survey window, data was transferred from Qualtrics to SPSS. Each item was labeled with the variable name and responses were converted from text to

numeric (e.g. *slightly disagree* to 3). Some of the teacher efficacy belief items were reverse coded, such as *Even a teacher with good teaching abilities may not reach many students* (Appendix C). For these items, if a respondent chose *strongly disagree* (1) the numeric response in SPSS was entered as *strongly agree* (6).

The final number of respondents totaled 74; School A had a final, 38.5% response rate, School B, 29%, and School C 50% (27, 14, and 33, respectively). School B had the most missed items across all constructs and cultural competency the most skipped items from all three schools. This may be indicative of items somehow being concerning to the respondents and the final survey results being potentially biased through this non-response (Hartman, Fuqua, & Jenkins, 1986). Other possibilities for participants skipping survey items include survey fatigue, where respondents may have been asked multiple times throughout the year to complete questionnaires (Porter, 2004) and the length of the survey with 20 minutes being a maximum time for completion (Revilla, & Ochoa, 2017). While the teacher beliefs survey for this study was completed at the end of the school year, with potential survey fatigue, and likely took most respondents 20 minutes to complete, this does not account for the lack of construct-specific responses. As survey items were purposefully randomized, respondents would need to intentionally *skip* a cultural competency item to continue answering those aligned to other constructs.

### **Data Analyses**

Data analyses were specific to methodology used to collect the data. Quantitative analyses were appropriate for all six research questions. Interview data was also collected for the following three constructs (a) academic emphasis, (b) faculty trust in parents and students, and (c) cultural competency. These constructs represent the study's convergent parallel mixed

method design and analyzed the appropriate quantitative and qualitative data separately before a final, integrated, analysis (Creswell & Plano Clark, 2011).

### **Qualitative Analyses**

Analyses of data from the three interview transcripts were completed within three deductive themes based on the applicable constructs (cultural competency, faculty trust of parents and students, and academic emphasis). The researcher began by carefully reading the transcripts using *In Vivo* coding to capture participants description of those themes (Miles, Huberman, & Saldana, 2014) followed by a second, affective coding, read to identify each principal's perception of the state of the construct themes within their respective schools. A matrix was developed to visually support the researcher's analysis of each principal's description within each theme (Miles et al., 2014). Quotes identified from the In Vivo and affective coded readings were pasted into the matrix under the respective theme column. Using the matrix, a second cycle of coding ensued looking for patterns within the identified quotes (Miles et al., 2014). Descriptive codes were developed and noted in bold-faced parentheses to support analysis of each principal's perception of the construct(s); In Vivo-identified words and phrases were then bolded and italicized (see Appendix D).

**Triangulation.** Existing climate and achievement data were analyzed to determine confirmatory information and triangulate principal perceptions. School-specific achievement data confirmed academic disparities between racial subgroups at all three schools (see Table 2.1). Each school's existing climate data supported an understanding of their individual increases or decreases between identified 2016 and 2018 NC TWC items. These data triangulated principal perceptions of academic emphasis, collective efficacy, and faculty trust of parents and students, the underlying constructs of academic optimism (Hoy et al., 2006).

**Credibility.** During the interview process, member checking was used to clarify principal responses to specific questions as an initial measure to assure reliability of the findings. Post interview, audio transcripts of each principal's responses were provided to the individual respondent to provide feedback and clarification. The researcher reviewed the final transcripts multiple times during the coding process to ensure as little subjectivity as possible. Additionally, field notes supported an accurate understanding of the respondents' meaning. A multi-layered matrix was developed to capture the coding process (see Appendix D; Miles, Huberman, & Saldana, 2014). With each round of coding the researcher reflected on the response and if it was true to the participant or a reflection of the researcher's bias towards, and relationship with, those she interviewed. This reflective exercise provided important insights for the researcher as the determination of the type of quote, and how it related to answering the research questions, revealed some predispositions, based on prior experiences, she was able to avoid incorporating into the final analysis.

### **Quantitative Analyses**

Survey items represented ten subscales: academic emphasis, collective efficacy, faculty trust in parents and students, personal teaching efficacy, general teaching efficacy, and the five levels of the SII: Individuation, Dissonance, Immersion, Internalization, and Integration (Sevig, Highlen, & Adams, 2000). All subscales were aggregated to create new, averaged, composite variables using the *transform* function within Statistical Package for the Social Sciences software (SPSS; Wagner, 2017). Variables relevant to the research question were interval (each subscale composite; dependent) and nominal (school; independent); descriptive statistics of these variables were run to capture the composite mean scores. Tables of each construct are presented under the relevant research questions, below.



## Mixed Method Analyses

A mixed-theme joint display (Creswell & Plano Clark, 2011) was developed for each identified research question to compare, analyze, and better describe each school's combined (teacher and principal) perception of the underlying factors impacting disparities in student achievement. These displays are presented in research questions three, four, and six in the analyses below.

## Findings

This section delineates the findings relative to each research question describing multiple methodologies as appropriate. Research questions 1, 2, and 5 utilize quantitative methods and questions 3, 4, and 5 mixed methods using joint displays.

**RQ1: What is the overall and racial subgroup proficiency (combined math and reading of 3rd - 5th grade students) and growth from each school? Are there disparities within each focal school?**

School proficiency and growth data is publicly available each year. To explore academic disparities between racial subgroups, percentages of racial subgroups who were proficient and percentages of growth data were compared (see Table 2.1). A school is noted to have *met* growth in a subject or subgroup with an index of -2.0 to 2.0. Scores above 2.0 are said to have *exceeded* growth whereas scores lower than -2.0 are noted as *not met* (NCDPI, 2018). The data represents the overall composite score (combined math and reading of 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grade students) to answer the research question for each school. All three schools' proficiency data indicate that Black and Hispanic students performed at lower levels, on average, than their White and Asian

Table 2.1

*Focal Schools Proficiency and Growth by Racial Subgroup, NCDPI, 2018.*

School	Racial Subgroup	Content	Proficiency	Growth
School A	All Students	All Subjects	79.60	3.09
	Asian	All Subjects	90.50	3.59
	Black	All Subjects	54.00	-2.69
	Hispanic	All Subjects	52.90	0.80
	Two or More Races	All Subjects	86.70	n/a
	White	All Subjects	84.30	1.83
School B	All Students	All Subjects	75.20	-1.37
	Asian	All Subjects	86.90	-0.11
	Black	All Subjects	60.90	0.08
	Hispanic	All Subjects	36.50	0.73
	Two or More Races	All Subjects	92.30	-0.65
	White	All Subjects	80.80	-1.75
School C	All Students	All Subjects	83.60	-1.62
	Asian	All Subjects	89.30	-0.54
	Black	All Subjects	71.40	-1.19
	Hispanic	All Subjects	63.80	0.33
	Two or More Races	All Subjects	79.60	-2.35
	White	All Subjects	78.70	-0.67

peers. School B had the largest disparity of 50.4% between Asian and Hispanic students and

School C had the smallest disparity of 25.5% between Asian and Hispanic students.

**School A: Disparate proficiency and growth.** The 2017-18 proficiency and growth data indicate School A's Black and Hispanic students with lower proficiency, on average, (at least 30 points) and growth compared to their White, Asian, and Two or More Races peers. The negative growth index for Black students is particularly disparate from the other subgroups and the only racial subgroup to not meet growth (see Table 2.1).

**School B: Proficiency disparities with growth.** School B's 2017-18 proficiency data (see Table 2.1) indicates that Black and Hispanic students underperformed, on average, compared to their White, Asian, and Two or More Races peers with disparities ranging from 43.3

to 50.4 points. Hispanic students are highly disparate compared with all other racial subgroups. However, the growth index indicates the opposite results for the same student groups with White students representing the group with the lowest growth index.

**School C: Narrowing disparities.** This school's 2017-18 proficiency data indicates Black and Hispanic students had lower percent proficient scores, on average, compared to their White, Asian, and Two or More Races peers; however, the academic disparity between these subgroups is much narrower than in School A or B. The Two or More Races subgroup received the lowest performance indicator on the growth index (see Table 2.1).

**RQ2: How does each school's teachers perceive their personal and general teaching efficacy?**

Gibson and Dembo's (1984) teacher efficacy scale is the sole quantitative measure to answer this research question. Items within the scale were identified as representing general or personal teaching efficacy. As noted above, some general teaching efficacy items were reverse coded in SPSS. Each construct was combined into a composite, or an average of all respondents within a school, personal teaching efficacy and general teaching efficacy variable for analysis (Table 2.2).

Table 2.2  
*Personal and General Teaching Efficacy Subscale Aggregate Means by School*

	N	Personal Teaching Efficacy	SD	General Teaching Efficacy	SD
School A	27	4.80	.44	3.75	.40
School B	14	4.96	.30	3.76	.56
School C	33	4.80	.46	3.69	.47

*Note:* SD = Standard deviation

All three schools' teachers reported higher levels of personal teaching efficacy (aggregate average above 4.8, approaching *agree* [5.000]) than general teaching efficacy (aggregate average between 3.692 and 3.765, middle of *slightly disagree*). Reviewing Table 2.2, School B has the highest aggregate mean (3.765) for general teaching efficacy and for personal teaching efficacy (4.969). School C shows the lowest average within the general teaching construct and is essentially tied (.001 higher) to School A in the area of personal teaching efficacy.

### **RQ3: How do principals and teachers describe a climate of academic emphasis?**

This question will be investigated through separate quantitative and qualitative findings before presenting a mixed method joint display (Table 2.5; Creswell & Plano-Clark, 2011). Data from the teacher beliefs survey academic emphasis subscale (Table 2.3; Goddard & Sweetland, 2000) and existing 2016 and 2018 TWC surveys (Table 2.4) provide quantitative findings over time. These data present as a combined percent of *agree/strongly agree* responses, based on a 4-point Likert scale, by each school's participating certified staff as displayed on the TWC website (TWC, 2018). Qualitative data represents principal interviews with findings presented by school.

Table 2.3  
*Academic Emphasis Subscale Aggregate Means by School*

	N	Academic Emphasis	SD
School A	27	4.29	.47
School B	14	4.17	.73
School C	33	4.47	.55

*Note:* SD = Standard deviation

Table 2.4

*North Carolina 2018 Teacher Working Conditions Survey Items Related to Academic Emphasis*

TWC Item	Related Construct	School	2016 Percent Agree/Strongly Agree	2018 Percent Agree/Strongly Agree
9.1.k. Teachers require students to work hard	Academic Emphasis	School A	98.4%	100.0%
		School B	100.0%	94.9%
		School C	100.0%	98.6%
9.1.l Teachers collaborate to achieve consistency on how student work is assessed	Academic Emphasis	School A	93.7%	97.1%
		School B	96.7%	89.8%
		School C	93.7%	94.1%

**Quantitative findings.** TWC survey results (Table 2.4) indicated increasing or steady/slightly decreasing teacher beliefs for Schools A and C whereas School B's teacher beliefs declined between the 2016 and 2018 TWC surveys. All three school's aggregated AE subscale data (Table 2.3) were in the *slightly agree* range.

**Qualitative findings.** This construct is operationalized as a school-wide focus on academic excellence by encouraging the achievement of every student (Hoy & Miskel, 2006; Hoy & Tarter, 1997). Schools with high levels of academic emphasis are supported, collectively, by all stakeholders including parents and the students themselves. Principals interviewed utilized terms such as *high expectations*, *knowledge*, *engagement*, and *urgency* to describe excellence for teachers who value high levels of learning for *all* students as a significant component of a school community's belief in the same (Goddard et al., 2000).

**School A: Standards and inquiry.** The standard course of study became the main topic as Principal A discussed aspects of high expectations and academic excellence: "We have standardized measures that are really important and at the end of the day, if we don't give kids the knowledge, understanding, and capacity to do that's required in our curriculum, then we don't

serve them.” Principal A also notes that there are students who currently are not experiencing academic success and need additional supports. He noted a focus on project-aligned differentiation, “a learning experience that increases engagement with learning and supports inquiry” as a way that honor individuals who may need supplemental teaching while also accessing similar activities to those already achieving. Consequently, Principal A’s focus on excellence was described as a collaboration between high level standards-based instruction and student interest couched in their experiences.

***School B: Intervention supports.*** Principal B articulated beliefs in achievement for those not currently demonstrating mastery: “We definitely believe in setting goals, and we believe that if we do the benchmarks along the way and we work hard, we’re going to get there.” Principal B also describes extra supports provided to students outside of the typical school day, “when we see a need, we’ve got to do something like that [provide extra instruction].” These quotes represent a commitment to the educational process for underperforming students but not necessarily a *school-wide* focus on academic excellence.

***School C: Academic equity.*** Like Principal A, Principal C describes an instructional focus on standards-based instruction: “I think about that academic excellence is knowing your standards and your content.” When discussing parent beliefs in schoolwide academic excellence, Principal C notes, “they also maintain an academic press with their learners but also have expressed concern that they also want to make sure that their students or their children are well rounded as well.” In describing data shared with both teachers and parents, Principal C notes: “When you have academic achievement data nationally in this country, and all the way at [our school] that looks like our [disparate] data for students of color, there needs to be a sense of

urgency.” Thus, *urgency* emerges as a clear aspect of Principal C’s perception of academic emphasis at School C, an intensity born from a focus on equity.

**Mixed method findings.** The academic emphasis (AE) composite variable mean agreement for each school, along with the two existing TWC climate data items aligned to the AE construct, were selected as quantitative data for mixed analysis. Qualitative data concentrated on principal descriptions of their school’s AE in practice and those desired within their specific school. Therefore, the resulting theme, *focal school’s academic emphasis perceptions*, combined teacher and principal views of this construct to provide a more nuanced analysis of this construct than the quantitative or qualitative could provide alone (see Table 2.5).

Quantitatively, school C shows the highest composite mean with little change (-1.4 and +0.4) between TWC climate measures between 2016 and 2018. School A’s composite mean is between Schools C and B with increasing TWC percentages (+1.6 and +3.4) while School B notes decreasing percentages (-5.1 and -6.9).

School A’s increasing TWC beliefs within the academic emphasis construct line up with Principal A’s perceptions indicating an associated school-wide focus on standards-aligned instruction and student individualization to support achievement. Principal A notes, “if we don't give kids the knowledge, understanding, and capacity to do that's required in our curriculum, then we don't serve them.” These data are also aligned to School A’s 4.296, *slightly agree*, academic emphasis average composite of this study’s teacher belief survey (Table 2.5).

School B’s data indicates declining teacher beliefs and very few expressed principal perceptions of academic emphasis as a school-wide focus on excellence as described by Goddard and colleagues (2000). As Principal B’s descriptions of academic responses focus on propelling

non-proficient students forward, staff may not see an atmosphere of academic excellence needed to have high beliefs around the AE construct.

Like Principal A, Principal C noted the importance of the standards, noting that “academic excellence is knowing your standards and your content.” As discussed within the cultural competency construct, Principal C believes that every student needs to be moved to a higher academic level and connects the school’s academic emphasis to equity. Teacher working condition survey data from 2016 and 2018 show a slight increase (+0.4) or decrease (-1.4) in School C’s teachers’ perceptions of academic emphasis aligned items. These data suggest that for School C’s teacher beliefs, while high (both the 2016 and 2018 percentages for each item are in the mid to high 90 percentile) may not *exactly* connect to their principal’s clear focus on equity as a means of ensuring academic emphasis at School C.



Table 2.5  
*Joint Display of Focal School's Academic Emphasis Perceptions*

	Quantitative			Qualitative	
	Composite mean	TWC 9.1.k 2016 to 18	TWC 9.1.1 2016 to 18	Examples of AE in practice	Examples of desired AE
School A	4.29	+1.60	+3.40	<p>We try to talk a lot about our kids (referring to intervention, AIG, social-emotional, students with disabilities, etc.).</p> <p>if we don't give kids the knowledge, understanding, and capacity to do that's required in our curriculum, then we don't serve them.</p>	<p>(Vision) So annual growth for all, catch up growth for those who are behind, a learning experience that increases engagement with learning and supports inquiry</p>
School B	4.17	-5.10	-6.90	<p>When we see a need, we've got to do something like that [provide extra instruction]. Sometimes that means you hire a teacher while she's tracked out, she's here and she's delivering those services during the school day.</p>	<p>But kids have to access grade level material. <i>Levels</i> can't hold them back.</p> <p>Academically we do so much with <i>guided reading groups</i> and with our own reading time, there's just so much.</p>
School C	4.47	-1.40	+0.40	<p>I think about that academic excellence is knowing your standards and your content.</p> <p>we have some kids in our building that are not being successful. And we don't have the typical excuses that you would find (our parents are not involved, or they don't have technology, or they don't understand).</p> <p>They [teachers and parents] also maintain an academic press with their learners but also have expressed concern that they also want to make sure that their students or their children are well rounded as well. Socially, emotionally okay</p>	<p>When you have academic achievement data nationally in this country, and all the way at [our school] that looks like our [disparate] data for students of color, there needs to be a sense of urgency.</p>

**RQ4: What are the principal and teacher perceptions of faculty trust in parents and students?**

Data from the teacher beliefs survey faculty trust in clients' subscale (Omnibus Trust Scale; Table 2.6, Hoy, Gage, & Tarter, 2006) and existing 2016 and 2018 TWC surveys (Table 2.7) provided quantitative findings over time. Principal interviews presented qualitative findings before these parallel data were integrated into a mixed method joint display (Table 2.8; Creswell & Plano-Clark, 2011).

Table 2.6

*Faculty Trust in Parents and Students Subscale Aggregate Means by School*

	N	Faculty Trust in Parents and Students	SD
School A	27	4.74	.50
School B	14	4.46	.59
School C	33	5.02	.50

*Note:* SD = Standard deviation

Table 2.7

*North Carolina 2018 Teacher Working Conditions Survey Items Related to Faculty Trust*

TWC Item	Related Construct	School	2016 Percent Agree/Strongly Agree	2018 Percent Agree/Strongly Agree
4.1.f. Parents/guardians support teachers, contributing to their success with students	Faculty Trust in Parents and Students	School A School B School C	98.4% 100.0% 98.5%	87.5% 93.1% 98.5%
4.1.g. Community members support teachers, contributing to their success with students	Faculty Trust in Parents and Students	School A School B School C	95.2% 98.3% 96.6%	83.8% 90.7% 93.7%

**Quantitative findings.** The aggregated means of the composite FT variable shows School C in the *agree* range of the 6-point Likert scale; School A and B are both in the *slightly agree* range (Table 2.6). All three schools saw some form of decline between the 2016 and 2018 TWC survey results (Table 2.7). School C's teachers reported, on average, higher levels of teacher beliefs in Faculty Trust in Parents and Students (98.5% on 4.1.f and 93.7% on 4.1.g) with a decline in the second item (*community members support teachers, contributing to their success with students*) of 2.9% where School A and B saw an 11.4% and 7.6% decline, respectively. Finally, School C stayed steady at 98.5% with TWC item 4.1.f while School A and School B declined (10.9% and 6.9%, respectively).

**Qualitative findings.** As a group, principal's perceptions of this theme centered around how faculty and parents interact with each other and any beliefs or concerns that occur therein. Positive levels of trust would be represented by faculty openly engaging with parents believing that parents have teachers' best interests in mind (Bryk & Schneider, 2002; Hoy et al., 2006).

***School A: Student focused.*** When discussing school-community partnerships at School A, Principal A focused on connecting through the student, "...what their kid is doing or what their kid needs that's tied to the work of the school." He noted that this connection supports a level of comfort between teachers and parents who may be very different: "[it] gives them a chance to feel more comfortable...it's about their child. This focus is directly related to the main difficulty Principal A described in developing parent engagement and thus faculty trust (Bryk & Schneider, 2002; Hoy et al., 2006): "We have a fractured community...as [our staff] is not representative of the community, they do not know how to invite them to be involved [in the school]." Thus, Principal A's understanding of faculty trust in parents and students exists within the student sphere versus an Integration with the full family unit.

***School B: Supporting teacher-parent interactions.*** Principal B described strategies and processes he uses to support teachers with parental interactions. Specific attention to families with socioeconomic needs was articulated:

I think it's also important when kids aren't doing their homework, not to give up on them because of that zip code. 'Well, mom works at nights,' or what have you. No, you've got a concern about that homework, then let's go and have a home visit with the mom.

This example described connections between faculty and parents; however, it is an interaction that needs to be supported by Principal B. The implication that Principal B facilitates teachers not giving up on students "because of that zip code," goes against the premise of the faculty trust in parents and students construct where teachers have confidence in parents (Bryk & Schneider, 2002) and an interest in collaboration to improve student outcomes (Brown et al., 2011; Hoy & Tschannen-Moran, 2003).

***School C: Parent trust of faculty.*** Within Principal C's context, South Asian families from India represent the largest group of School C's parents. During the interview, Principal C did not directly discuss faculty involvement with parents but did consistently refer to the involvement and trust of the school's parents. "Our parent community, our parents, are very involved, very trusting of the school system. [They are] very engaged, I would even say more so than being involved." As reported by Bower, Bowen, and Powers (2010), there is a reciprocal relationship between parent and faculty trust, so Principal C's description of parent trust may equally indicate faculty trust in parents.

**Mixed method findings.** The composite variable mean agreement for each school was selected for the quantitative *faculty trust in parents and students* (FT) along with the two existing TWC climate data items aligned to the FT construct. Selected qualitative data focused on

principal descriptions of their FT interactions differentiated by characteristics in practice versus those desired with their school's unique context. The resulting theme, *focal school's faculty trust perceptions*, mixed teacher and principal views of this construct (see Table 2.8).

This construct shows a great deal of variability between schools in terms of teacher's reported beliefs from the survey, existing TWC data, and qualitative principal perceptions. When reviewing the joint display (Table 2.8) these differences are noticeable, effectively allowing the mixed methodology to triangulate and confirm the disparities within and between schools (Onwuegbuzie & Leech, 2006).

School A's principal described difficulties coming together as a community due to a lack of equitable representation across demographics and that where FT is in practice, his stated purpose is to provide opportunities for parents to find comfort in their child's progress. As the construct is faculty trust in *parents* and students, the principal's focus on parent trust versus faculty effectively puts the responsibility for developing trust on parents. Teachers may facilitate this by engaging in student centered discussions but a connection between the faculty and parents as partners is not expressed by Principal A. Teachers at School A may also feel this disconnect as parent collaboration, an essential aspect of faculty trust in parents and students (Brown et al., 2011; Tschannen-Moran, 2003) was perceived, on average, as declining by School A teachers as measured by the 2018 TWC (-10.9 and -11.4; Table 2.8).

The difference between School B and School C's composite mean scores (4.46 and 5.02, respectively) is larger than the differences within other constructs (0.56) and, when triangulated with teacher's prior TWC survey perceptions, is decreasing for School B and maintaining for School C. Weaving in principal perceptions, this disparity between schools is confirmed as Principal B is focused on the actions of different parent groups within the school that appear to

Table 2.8

*Joint Display of Focal School's Faculty Trust in Parents and Students Perceptions*

	Quantitative			Qualitative	
	Composite mean	TWC 4.1.f 2016 to 18	TWC 4.1.g 2016 to 18	Examples of FT in practice	Examples of desired FT
School A	4.74	-10.90	-11.40	opportunities where it's about what their kid is doing or what their kid needs that's tied to the work of the school that gives them a chance to feel more comfortable about it because it's not as much about them, it's about their child.	because it (the school) is not representative of the community in its faculty or in its parent leadership or in its administration, does not fully understand the cultural dynamics of the community
School B	4.46	-6.90	-7.60	some of our stay-at-home parents will come in during literacy time and will facilitate a station or will monitor what's going on over here with the kids so the teachers can work in K1 and their guided reading groups or what have you. There's just so many ways that they're involved.	I think it's also important when kids aren't doing their homework, not to give up on them because of that zip code.  We're always looking for ways for them [parents] to be more engaged.
School C	5.02	0.00	-2.90	We've done academic parent teacher team meetings this year where they come in and they're looking at data alongside us, and how the cohort of kids are moving. Then sometimes we drill that down to the classroom level when they come in for the academic parent teacher team meetings.	I would like to say in this building, the education is valued, and I've learned that even more so about the Indian culture per se, where the teacher's considered the guru and it's related to the head and knowledge and that's why they're held in such high esteem. And so, even with the African American families, our Caucasian families, international families, they all [parents of varying cultures] value what opportunities education can provide for their children.

align with socio-economic status (“stay at home” parents supporting in the classroom versus efforts to “engage” families whose parents work or work at night). School C’s principal, however, actively discusses forms of teacher-parent partnership, “academic parent teacher team meetings” noted as the relationships necessary to improve student outcomes (Bower, Bowen, & Powers, 2010) This, and the respect Principal C noted parents give to teachers, sets the stage for faculty trust in parents and students (“teachers are considered the guru;” Hoy, Gage, & Tarter, 2006). Reviewing all three schools, collected FT data is consistent within schools across measures and indicates alignment between each principal’s perceptions and their teachers’ reported beliefs.

**RQ5: What is each school’s state of collective efficacy?**

This question was answered using the aggregated mean agreement of the teacher beliefs survey collective efficacy subscale (Table 2.9). Existing TWC data (Table 2.10), collected in 2016 and 2018, provided another layer of quantitative data to further compare teacher’s perceptions by school over time.

Table 2.9

*Collective Efficacy Subscale Aggregate Means by School*

	N	Collective Efficacy	SD
School A	27	3.80	.22
School B	14	3.82	.28
School C	33	3.74	.21

*Note:* SD = Standard deviation

Table 2.10

*North Carolina 2018 Teacher Working Conditions Survey Items Related to Collective Efficacy*

TWC Item	Related Construct	School	2016 Percent Agree/Strongly Agree	2018 Percent Agree/Strongly Agree
9.1.m. Teachers know what students learn in each of their classes	Collective Efficacy	School A School B School C	93.5% 94.8% 95.0%	95.7% 89.7% 92.6%
9.1.n. Teachers have knowledge of the content covered and instructional methods used by other teachers at this school	Collective Efficacy	School A School B School C	90.3% 93.2% 90.6%	97.1% 81.4% 91.2%

Teacher's reported collective efficacy beliefs showed similarity; each school was close to the slightly agree mean score of 4.0 (School A = 3.80; School B = 3.82; School C = 3.74; Table 2.9). Of the three schools, School B reported, on average, the lowest 2018 teacher working condition scores in both items (89.7% and 81.4%; see Table 2.10): "Teachers know what students learn in each of their classes" and, "Teachers have knowledge of the content covered and instructional methods used by other teachers at this school." Additionally, School B experienced a percent agreement decrease from the 2016 to the 2018 with both TWC items (-5.1% and -11.8%, respectively). Conversely, School C's 2018 TWC scores were in the low 90th percentile with little to no decline (92.6% and 91.2% with -2.4% and +0.6%, respectively). School A, however, noted high and increased agreement in the 2018 TWC (95.7% and 97.1%; +2.2% and +6.8%, respectively).

**RQ6: What are principals' and teachers' perceptions of their cultural competency?**



This convergent parallel mixed method question is answered through separate findings from quantitative (beliefs survey) and qualitative (principal interviews) cultural competency data before being integrated into a joint display (Creswell & Plano-Clark, 2011).

**Quantitative findings.** Aggregated means of each cultural competency subscale (Table 2.11; Self-Identity Inventory stages 1-5; see Appendix A) from the teacher beliefs survey indicate that teachers at all three schools reported the highest composite averages within the *Integration* (stage 5) subscale with results in the *slightly agree* (4.00 – 4.99) range of the 6-point Likert scale (Table 2.12). Additionally, all three schools' lowest mean scores are within the *Individuation* level (stage 1) ranging from *disagree* (2.83; School A) to *slightly disagree* (3.40 and 3.33; School B and C, respectively).

The remaining subscales: Dissonance, Immersion, and Internalization, represent the transition from personal through interpersonal levels of cultural competency (JohnBull, 2012; Sevig, Highlen, & Adams, 2000). Immersion (stage 3 and the first interpersonal level; JohnBull, 2012) was the lowest score, *disagree* to *slightly disagree*, for all three schools. School A's averaged belief scores for Dissonance and Internalization were in the slightly agree range of the 6-point Likert scale (4.16 and 4.20, respectively). School B had a slightly higher Internalization average than School A (4.23) and a slightly lower Dissonance (4.09). School C's scores in both Dissonance and Internalization were lower than Schools A and B, in the *slightly disagree* range (3.85 and 3.62, respectively). As noted in the methods section, the cultural competency subscales within the teacher beliefs survey had the most skipped items, and School B the highest percentage skipped based on the number of respondents between schools (Figure 2.1).

Table 2.11  
*Cultural Competency Subscales Aggregate Means by School*

	N	Means	SD
School A	27		
Individuation		2.83	1.12
Dissonance		4.16	.85
Immersion		2.72	1.00
Internalization		4.20	.74
Integration		4.64	.72
School B	14		
Individuation		3.40	1.05
Dissonance		4.09	.75
Immersion		3.16	1.20
Internalization		4.23	.90
Integration		4.38	.79
School C	33		
Individuation		3.33	1.13
Dissonance		3.85	.75
Immersion		3.15	.89
Internalization		3.62	.83
Integration		4.04	1.11

*Note:* SD = Standard deviation

Item	Question	School A # respondents skipped	School B # respondents skipped	School C # respondents skipped
CC 1	I am who I am, so I don't think much about my identity. (1)	1	1	2
CC 2	Sometimes I get tired of people complaining about racism. (1)	1	0	2
CC 3	I believe there is justice for all in the United States of America. (1)	1	2	1
CC 4	I am starting to feel angry about discrimination in this country. (2)	1	1	1
CC 5	I am just beginning to see that society doesn't value people who are "different." (2)	0	2	3
CC 6	I understand that everyone is expected to follow the same rules even if they don't seem to be right for everyone. (2)	0	2	3
CC 7	My identity as a member of my group is the most important part of who I am. (3)	0	2	3
CC 8	Being with people from my group helps me feel better about myself. (3)	1	2	2
CC 9	I focus most of my time and efforts on issues facing my group. (3)	1	2	4
CC 10	I recently realized that I don't have to like every person in my group. (4)	0	2	3
CC 11	My oppressed identity does not primarily define who I am as it did in the past. (4)	4	5	9
CC 12	I have <i>recently</i> seen the depth to which oppression affects many groups. (4)	1	3	1
CC 13	People in the U.S.A. have been socialized to be oppressive. (5)	1	4	4
CC 14	I would be happy if a member of my family were openly gay/lesbian/bisexual, regardless of my sexual orientation. (5)	2	3	3
CC 15	I would have as a life partner a person of a different race. (5)	1	4	3

Figure 2.1: Number of Skipped Cultural Competency Items within the Teacher Belief Survey

**Qualitative findings.** Cultural competency was described through the lens of meeting the needs of diverse learners and discussing issues of race/equity/diversity with teachers. This theme is in line with literature focused on cultural competency to conceptualize this construct as how one sees their identity and responds to those different than themselves with the acknowledgement of oppression that can be experienced personally, interpersonally, or

institutionally (JohnBull, 2012; Mayfield & Garrison-Wade, 2015; Myers et al., 1991; Sevig, Highlen, & Adams, 2000). Each principal captured different levels of perceived teacher cultural competence, or how they see school staff responding to student diversity, through their responses.

***School A: Pragmatic equity beliefs.*** Principal A presented a very pragmatic, or practical, belief structure around ideas of equity and diversity based current and recent historical data: “our achievement data...and to some degree our discipline data reflects that we do not provide equity of opportunity at our school.” Principal A described his intentional understanding of these disparities and an active plan to discuss equity and implicit bias at School A to, “prevent the predictability of achievement among students of color.” Principal A discussed part of his plan is to ensure that, “instruction, the first time, is aligned to the standards and accessible for *all* kids including how we build scaffolds...to increase flexibility and supports...in the classroom.” Standards alignment is Principal A’s sensible first step to ensure *every* student is receiving clear instruction, understanding why that instruction is important, and receiving differentiated activities as appropriate. Additionally, it was clear that Principal A’s articulated vision is one focused on increasing cultural competence through an anti-racism focus as he described goals for his school community: “Social justice will eliminate the predictability of achievement on the basis of race and economics and other factors....” This description, and the similar quotation noted above by Principal A, is an excerpt from the districts’ strategic plan and represents the aligned pragmatism, on an OTAID *interpersonal* level (JohnBull, 2012; Sevig, Highlen, & Adams, 2000), Principal A hopes to bring to School A’s focus on equitable outcomes.

***School B: Conflicted equity beliefs.*** Principal B’s cultural competency responses centered around his desire to have a diverse staff to mirror student demographics, “I wish my

teaching staff was as diverse as my student population” and ensuring that students are treated equally:

We don't think of them in these little boxes and in these little containers [referring to demographics], we just think of them as [mascot]. We just take them all where they are, wanting to move them to that next level.

This description from Principal B appears couched in the *personal* level of the OTAID model, specifically the idea of seeing all students the same without recognizing individual cultures (JohnBull, 2012; Sevig, Highlen, & Adams, 2000). Additionally, Principal B’s interview also acknowledged times where discussing diversity and equity for all students was not an easy conversation: “There is an angst that comes along with [speaking about issues of diversity] because if you don’t do it well you are going to offend people.” This, in tandem with comments such as, “that these kids [historically marginalized] are only going to achieve what you feel like they can” highlight Principal B’s conflicting beliefs in equity work. Principal B’s description of supporting his staff with difficult discussions, with parents and each other, appear to reference teaching efficacy concerns intermingled with lower levels of cultural competence at School B.

***School C: Passionate equity beliefs.*** The interview with Principal C provided the most passionate responses as she described a clear vision towards, and focus on, educational equity and narrowing disparities between subgroups, “So our school wide goal at School C is by 2021 we'll eliminate the opportunity gaps between our highest performing group in our building and the rest of the groups in our building.” Principal C purposefully chose to use the term opportunity instead of achievement as she discussed the academic disparities at School C. *Opportunity* was selected to indicate that disparate outcomes are not a result of the student, but in their afforded opportunities. Principal C works towards the goal of narrowing gaps with intentional decisions

and teacher expectations; she articulated an active desire to hire teachers that mirror the student body, “So [I am] trying to really make sure as much as I can that my teaching staff reflects the diversity”. Additionally, Principal C discussed her expectation that all teachers are working towards individualized instruction, “making sure that [teachers] know their learners, [they] cannot teach the content without understanding the student!” Principal C made it clear that if teachers cannot provide equity to every child, School C is not the setting for their career.

**Mixed method findings.** Mixing quantitative and qualitative cultural competency data, the researcher selected the focal school’s mean agreement for the five quantitative cultural competency (CC) composite variables and the overall percentage of missed CC survey items by school. The qualitative selections focused on principal descriptions of their school or teachers differentiated by culturally competent characteristics in practice versus those desired or part of the principal’s vision for their specific school community. Combined, the resulting theme identified as *focal school’s cultural competency perceptions* mixed teacher and principal views of this construct (see Table 2.12).

Reviewing the joint display (Table 2.12), inconsistencies are apparent within each school’s mixed CC data, and when viewing the data next to the other focal schools. For example, School B has the second highest aggregate mean (4.38) within the *Integration* stage (level 5, institutional awareness of oppression) and the highest mean (4.23) within the *Internalization* stage (level 4, interpersonal awareness of oppression; JohnBull, 2012; Sevig, Highlen, & Adams, 2000). However, School B also exhibited the largest percentage of items that did not receive a response on the cultural competency subscales. Additionally, Principal B’s qualitative data appear to ascribe to lower stages of the OTAID model (see Appendix A), specifically stages within the *personal* level with descriptions of staff experiencing *angst* when engaging in

Table 2.12

*Joint Display of Focal School's Cultural Competency Perceptions*

	Quantitative		Qualitative	
	Subscales Composite means	% CC items skipped	Examples of CC in practice	Examples of desired CC
School A			I talk about it (racial equity) openly in individual conversation	I don't think that in our context we are especially successful if folk are uncomfortable...talking to them about it in a whole group
Individuation	2.83	3%	My [Principal A's] belief that we live in a racially unjust society and that our schools are the greatest... agents of change to touch every child and, through a social justice approach to teaching and learning, create a more equitable society.	[We] will create a community in a world that we would all want to live in because we've got folk who have limitless opportunity to do whatever it is that they want.
Dissonance	4.16			
Immersion	2.72			
Internalization	4.20			
Integration	4.64			
School B		12%	[I] try to reach out to places like [university] that we're going to have a job and try to find diverse candidates.	I wish my teaching staff was as diverse as my student population
Individuation	3.40		...these kids [historically marginalized] are only going to achieve what you feel like they can. If you treat them like they can't, they won't.	There is an angst that comes along with [speaking about issues of diversity] because if you don't do it well you are going to offend people
Dissonance	4.09			
Immersion	3.16			
Internalization	4.23			
Integration	4.38			
School C		6%	[I'm] trying to really make sure as much as I can that my teaching staff reflects the diversity.	I have not mandated [staff take equity/implicit bias training] because my philosophy of belief is if you don't feel a need, you don't see the need, I don't want to mandate that right now. Not right now.
Individuation	3.33		our school wide goal at School C is by 2021 we'll eliminate the opportunity gaps between our highest performing group in our building and the rest of the groups in our building.	It's even opening your eyes and having a lens, how are we providing these equitable opportunities for kids?
Dissonance	3.85			
Immersion	3.15			
Internalization	3.62			
Integration	4.04			

conversations about diversity. Comparing this to the amount of cultural competency items skipped by School B on the beliefs survey (Figure 2.1), staff uncomfortable with the topic may have been those who skipped CC items and were not included in the study's analyses. Hartman et al. (1986) describe nonresponse bias through incomplete responses as a reaction to a potential negative response or simply not understanding the question. Would School B's mean agreement have been lower if the skipped items had been answered and thus more aligned to Principal B's qualitative perceptions?

Reviewing School A's and School C's qualitative data, both appear to be approaching or within the *interpersonal* level of the OTAID model with reported desires to effect change within their schools. Quotes around *creating a more equitable society* (School A) and *eliminating opportunity gaps* (School C) supports these principal's focus on valuing other cultures and seeking to understand oppression (JohnBull, 2012; Sevig, Highlen & Adams, 2000). However, where School A's teacher reported beliefs trend towards the *slightly agree* range with the most culturally aware stages (Internalization and Integration; 4.20 and 4.64, respectively), School C's teacher perceptions are in the *slightly disagree* and just over the *slightly agree* levels (3.62 and 4.04, respectively). School A's collective data appears to indicate cohesion in the faculty's cultural competency while School C's may suggest disconnects between Principal C's strong equity focus and the identity development of the School C faculty. Finally, like School B, the aggregated means of School A's and C's cultural competency subscale composites are impacted by non-respondents (3% and 6% of questions skipped, respectively).

The following item represents Internalization (stage 4) on the SII: *I have recently seen the depth to which oppression affects many groups* (Sevig, Highlen, & Adams, 2000). Indicative of the interpersonal level of the OTAID (JohnBull, 2012; Sevig, Highlen, & Adams, 2000), this item sums up the disconnects between principal and teacher perceptions of cultural competencies



at each school. School A, for example, had the highest percentage of teachers responding *strongly agree* with the Internalization item (22%) on the 6-point Likert scale. However, Principal A discussed carefully choosing when to speak to staff about equity issues, “I don’t think that in our context we are especially successful if folk are uncomfortable....” While Principal A also eloquently discussed interpersonal levels of cultural competency as described above, teachers at School A may be more *ready* for those Internalization and Integration stage conversations than Principal A believes.

Considering the same Internalization item (*I have recently seen the depth to which oppression affects many groups*), School B had one teacher (7% of respondents) answer *strongly agree* despite having the highest overall mean score for the Internalization stage items across schools (4.23). As noted above, Principal B provided perceptions within the personal level (stages 1, Individuation, or 2, Dissonance) of the OTAID model. The high teacher belief survey mean score for Internalization occurred despite the single strongly agree response for the indicated item, meaning other Internalization items received higher responses. Thus, the collective data for School B indicates perceptions that are not aligned between principal and staff, and, perhaps, also a lack of alignment between teacher respondents.

School C had the highest completed response rate (50%) of the three schools and the lowest Internalization mean score (3.62). On the *I have recently seen the depth to which oppression affects many groups* item, 18% responded strongly agree. Of the three principals, Principal C responded more in the interpersonal range of the OTAID (including Immersion and Internalization; JohnBull, 2012; Sevig, Highlen, & Adams, 2000) with an understanding of the systemic inequities impacting student outcomes, “We’ll eliminate the opportunity gaps between our highest performing group in our building and the rest of the groups in our building.” The disconnect between Principal C’s perceptions and those indicated on School C teacher responses

to the SII are reflected in the following Principal C statements: “I have not mandated [equity training] ...I don’t want to mandate that right now. Not right now” and, “They [teachers] are a lot more aware this year than they've ever been in terms of understanding what those inequities look like even beyond the classroom.” Both of these statements were made about the teaching community as a whole by Principal C, however, if equity PD is optional then those with more awareness would be those that have opted to engage in that training. More overt opportunities for School C’s teachers to engage in the equity work Principal C demonstrates at a high level may bring School C’s perceptions into alignment.

### **Discussion**

This study investigated factors influencing academic disparities between racial subgroups for a school that, at the time, had not opened. Three nearby schools were identified based on their students being reassigned to TFES. Principal interviews, teacher survey responses, and publicly available achievement and climate data were woven together to create a tapestry of incoming student and parent experiences that will influence the initial TFES climate. By understanding the experiences and school climates of participating teachers, additional details are added to that tapestry, including determining which factors may be actionable to change the final picture students of all races experience at TFES.

Each of the three focal schools are located close to each other and have similar demographics. As indicated in the findings for RQ1, all three schools also have reported academic disparities between racial subgroups. Approximately 90% of TFES students will be reassigned from these schools and it is fair to believe that the school will open with these disparities as well. When individual construct aggregated means for academic emphasis, collective efficacy, and faculty trust in parents and students were compared to existing TWC survey data, no major differences were noted. The TWC highlighted that these current aggregate

means between schools were often part of a multi-year trend and indicated overall high beliefs in academic emphasis, moderate beliefs in faculty trust, and a mixture of high (School A) and moderate (Schools B and C) beliefs in collective efficacy.

Collective efficacy, or the faculty's belief that they can provide students with positive outcomes, data resulted in findings of interest when considering the influence of the focal schools on a new school. For example, given the higher average reported collective efficacy teacher beliefs of School B in the teacher belief survey than the other two schools, but the lowest participation and highest nonresponse of those who did participate, the disconnect between the aggregate mean and the sharp decline in School B's TWC data may be a result of nonresponse bias (Hartman et al., 1986). School A, however, increased their percent agreement in 2018 and may be in the process of developing a climate of collective efficacy that demonstrates Bandura's (1997) reciprocal causality; this phenomenon is noted by Goddard, Hoy, and Woolfolk Hoy (2000) as an expected result of a school developing a positive climate of collective efficacy.

A quantitative finding of interest is the difference of aggregate means, across schools, between personal teaching efficacy and general teaching efficacy. With each school being close to the agree indicator for personal teaching efficacy yet solidly with the middle of the slightly disagree level for general teaching efficacy, the data appear to suggest that teachers in the three focal schools believe in themselves more than their colleagues' ability to impact student outcomes. JohnBull (2012) found that those with the lowest levels of cultural awareness also reported lower levels of general teaching efficacy where student outcomes are more likely to be ascribed to factors outside the classroom than the influence of the teacher. While all three school's reported cultural competency beliefs indicated higher levels of identity and oppression awareness, stage 2, Dissonance, was high (4.01, slightly agree, average across schools) and stands out as an anomaly between the lower stage 1, Individuation, and stage 3, Immersion

scores. This finding warrants future investigation with a larger sample size and with consideration of social desirability bias, or the impetus of survey respondents to answer in a positive manner rather than a true reporting (Lavrakas, 2008).

Qualitative and mixed method analyses of academic emphasis, faculty trust in parents and students, and cultural competency provided a rich understanding of each focal school, including some disconnects between principal descriptions of their schools when compared to reported teacher beliefs. Of particular interest were the integrated cultural competency findings and the high number of skipped items within that construct. Reviewing the number of respondents that skipped each item, questions 11 and 13 were highest across all three schools (Figure XX). Interestingly, both items focus on *oppression*. It may be that respondents were uncomfortable with the idea of oppression, did not understand how it related to them (question 11), or did not want to answer honestly (question 13; Hartman et al., 1986). Understanding the personal, interpersonal, and institutional impacts of oppression is necessary to move along the CC continuum (JohnBull, 2012; Sevig, Highlen & Adams, 2000). The intentional skipping of oppression-focused items within the survey may indicate the need for cultural competency development support at all three focal schools. Alternative reasons for non-response include not understanding the question or the term *oppression*. Reviewing the joint display, however, the convergence of data suggests that respondents simply wanted to avoid the topic. This conclusion is supported by a lack of cohesion between each school principal's perceptions and teachers' reported beliefs within the cultural competency construct.

### **Limitations**

As a principal within the same district area as School A, School B, and School C, I enjoy a camaraderie with my principal colleagues that may have inadvertently created pressure on their

consent to participate. A protocol discrepancy occurred with Principal C's interview in that she asked to see the items before our meeting (received the day before) and her interview required two separate sessions due to time constraints. Finally, working with my colleagues, I am cognizant that there could be subjectivity and bias towards my previous school in my analyses and conclusions. This potential bias was constantly checked through validity protocols including member checking, keeping copious notes of the interview, coding and analysis processes, and data triangulation.

### **Implications for Research and Practice**

As a best practice, additional research is needed on how a school's current teacher beliefs compare to their principal's perceptions and student achievement. Current principals analyzing climate, demographic, and achievement data within the constructs of teacher efficacy, cultural competency, and academic optimism using methods similar to this study may find areas of climate reflection, or a focus for staff development, in response to nuanced academic disparities.

For TFES, this needs assessment provided an excellent understanding of the previous climate experiences that informed its baseline community. This research also confirmed that the six constructs investigated in this study are factors impacting the perceptions of teachers and school leaders. Each school illustrated academic disparities between racial subgroups and aspects of teacher efficacy, cultural competency, or school climates that are in decline, unaligned to their school leader's perception, or otherwise in need of additional support. Of these factors, cultural competency, while important to principals' described vision for the school community, represented the most inconsistencies between principal and teacher perceptions across the three qualitative constructs (academic emphasis, faculty trust in parents and students, and cultural competency). Importantly, when looking at the stages of self-identity development within the

OTAID model (Myers et al., 1991; Sevig, Highlen, & Adams, 2000) across schools, the intentional skipping of cultural competency items by respondents should bring additional scrutiny to the subscale aggregated means of each school.

General teacher efficacy and collective efficacy were also of note across contexts with lower teacher reported beliefs, on average, than the other measured constructs. These actionable factors should be further researched for potential interventions to improve teacher beliefs and instructional practices. However, proactive activities supporting a staff's level of cultural competency may provide the intentional supports needed to effectively implement culturally responsive instructional improvements within a new school that increases every student's opportunity to learn (Gee, 2008). As a result of this needs assessment, the following intervention literature review focuses on cultural competency. Confirming that the historic problem of academic disparities between racial subgroups exists in surrounding schools supports the premise that it, and lower levels of cultural competency, will also exist within the TFES community.

### **Chapter 3**

Reviewing the literature through a networked systems theory approach (Neal & Neal, 2013) confirmed the historic factors and contemporary existence of academic disparities between racial subgroups. The literature review also identified the most salient factors to investigate within the highly diverse and affluent TFES context. The resulting exploratory, mixed-methods, needs assessment study confirmed academic disparities at each of the sending schools between Black and Hispanic students and their White and Asian peers. Academic disparity percentages between racial subgroups within the three schools ranged between 25.5% and 50.4%.

In addition to confirming disaggregated levels of student achievement, the needs assessment found that each of the three focal schools demonstrated some manner of variable staff beliefs at the school and teacher levels. The varied school level factors included collective efficacy, academic emphasis, and faculty trust of parents and students, and the fluctuating individual factors included personal teaching efficacy, general teaching efficacy, and cultural competency. Within the three schools, collective efficacy, general teaching efficacy, and cultural competency received lower mean scores than those found in the other measured constructs. Of these factors, cultural competency displayed the most interesting variance, within and between each school, with a higher percentage of skipped quantitative items and indirect qualitative responses. The lack of completed information may indicate non-response bias in the resulting cultural competency data; as a result, the aggregated means of participants' reported cultural competency may be much lower (Hartman, Fuqua, & Jenkins, 1986).

In response to the needs assessment's findings, this chapter investigates intervention literature best situated to improve TFES student outcomes for every student equally between racial subgroups. This review begins by presenting the researchers' theoretical and conceptual frameworks used to couch decisions related to creating a TFES-specific intervention. A review

of studies focused on increasing teaching efficacy through improved instructional practices were briefly examined to determine their relevancy as interventions. However, the researcher continued to return to the importance of increasing teacher cultural competency and, that without a reduction of implicit bias, other interventions would not have this underlying component necessary to effect long-term change. Cultural competency and implicit bias intervention scholarship were thoroughly reviewed and, within the structure of Mezirow's (1997) transformational learning theory, critical reflection was selected as an intervention to impact cultural competency. This review culminates with the researcher's intervention proposal designed to immediately improve cultural competency and distally ameliorate academic disparities between racial subgroups within the TFES community.

### **Theoretical and Conceptual Frameworks**

This researcher continued to focus on the mesosystem within Neal and Neal's (2013) networked ecological systems theory (EST) to frame investigations into the problem of practice affecting TFES. Networked EST describes intermingled interactions that directly or indirectly affect a focal individual; this theory is an extension of Bronfenbrenner's (1979) initial EST where interactions were conceptualized as *nested*, independently, one within the other, to comprehend a focal individual. The problem of practice focuses on student outcomes as the networked individual with identified factors at the teacher and school levels. The networked mesosystem is defined as contextual (microsystem) interactions of individuals in a variety of settings that affect the focal individual (Neal & Neal, 2013). Therefore, the mesosystem interventions found in this review concentrate on teacher practices that may impact school microsystem factors. Two additional theories will be described in support of the proposed intervention and related conceptual frameworks.



## Optimal Theory Applied to Identity Development

When considering the intervening PD sessions at TFES, faculty acknowledgement of different aspects of their identity and the impact that facet has on themselves and others is an important move along a continuum of cultural competency (JohnBull, 2012). Myers et al's. (1991) optimal theory applied to identity development (OTAID) model provides a continuum to acknowledge the numerous identity aspects individuals hold and respond to within the identity development process. As an individual becomes more aware of their identity, and how society responds to beliefs about various identities, benefiting some and oppressing others, their awareness and response towards themselves and others—their cultural competency—increases (JohnBull, 2012). The following OTAID stages (Table 3.1; Sevig, Highlen & Adams, 2000) demonstrate this continuum of cultural competency and can be grouped into three levels: personal (levels one and two), interpersonal (levels three and four), and institutional (levels 5 and 6; JohnBull, 2012).

Unique to OTAID is the acknowledgement of identity as a holistic development process, one that embraces the simultaneous interactions of differentiated identity components (Pope & Reynolds, 2017). This is also known as intersectionality, a term first used by Crenshaw (1991) to describe the interactions of two or more categories of an individual's identity. This approach to identity supports seeing the multi-identified individual versus one cancelling the other out (Carbado, Crenshaw, Mays, & Tomlinson, 2013). For example, a White woman and a Black woman are both *women* but likely have different conceptualizations about what it means to be one based on their race-based experiences or a specific context of day to day interactions.

Table 3.1

*Stages from Optimal Theory Applied to Identity Development (OTAID)*

Stage	Description
1 - Individuation	People experience separateness but feel a connection to societal conventions and may not question how much they have been shaped by society. Consequently, they are more likely to ascribe to group stereotypes and identify with mainstream culture.
2 - Dissonance	People begin to experience a feeling of alienation from mainstream society, often as a result of vicarious or direct discrimination and exclusion.
3 - Immersion	Feelings of pride and a sense of belonging can occur when people identify with their subculture group (or part of their identity they have previously devalued and not explored). Negative feelings about the dominant culture may be present, as well as negative feelings toward other subcultures or members of their own group who do not share similar perceptions of oppression.
4 - Internalization	People positively integrate their subgroup identity into their self-concept. People are more tolerant and accepting of others, because those who are different no longer threaten their newfound sense of self and because they are starting to understand the nature of oppression more fully.
5 - Integration	People recognize that the American social structure creates and perpetuates oppression, thus people in this phase exhibit greater unconditional positive regard for themselves, others, and all of life. Differences among all people are recognized and embraced.
6 - Transformation	People encounter a transformation by experiencing spiritual-material unity and a conscious recognition of the interrelatedness of life, so self is defined even more holistically.

*Note:* Adapted from Sevig, Highlen, and Adams (2000) p. 170-171.

### **Transformation Theory of Adult Learning**

To support improved cultural competency, it is important to consider processes of adult learning. Mezirow's (1997) transformative learning theory describes the process of changing one's *frame of reference*, defined as structures of personal understanding, that supports the experiential context of acquiring meaningful information. *Habits of mind*, routines that focus our feelings and thoughts towards specific interpretations, and *points of view*, how we express our habits of mind, are the two components within a frame of reference (Mezirow, 1997). Mezirow (1997) proposed that for adult learning to be effective, one must become critically reflective of assumptions—of ideas and of the self—to engage in the discourse, defined as critical discussion

focused on understanding why an alternative point of view exists, necessary to incorporate new, meaningful, information into their established frame of reference.

This *critical self-reflection of assumptions* is described by Mezirow (1998) as a crucial assessment of one's beliefs that developed the habits of mind around a particular type of experience such as political, economic, ideological, cultural, and the like. While *reflection*, or the broad process of examining one's actions and responses to actions (Fook, 2015), is often incorporated into intervention efforts (Basma & Savage, 2018; Dreyer, 2015; Fine & Kossack, 2002; Saylor & Johnson, 2014), critical reflection is highly specified and refers to the process of examining one's beliefs to, ultimately, transform them (Fook, 2015; Gorski & Dalton, 2019; Mezirow, 1998). Therefore, critical reflection activities solicit participants to analyze their assumptions of beliefs rather than their thoughts around recent experiences; in this way, transformational learning occurs (Mezirow, 1997; 1998) and can positively impact social justice efforts (Gorski & Dalton, 2019; Liu & Ball, 2019).

Importantly, as adults work to understand the beliefs and ideals of others, they must understand what others communicate, a skill noted to require one to critically reflect on their own assumptions, especially when inquiring upon or seeking to understand the intent or emotion of another (Mezirow, 1998). Thus, when considering the TFES focus of increasing cultural competency through the reduction of implicit bias, providing staff the skill and time to critically reflect on their past and present experiences with others different than themselves is theorized to have a transformational impact on teaching, and therefore student outcomes.

There are a variety of ways one may turn inward to contemplate the conceptual limitations they have identified as problematic otherwise known as subjective reframing (Mezirow, 1998). This critical self-reflection of assumptions is further disaggregated into types, such as *systemic*, where one seriously self-reflects on the beliefs and ideologies that developed

their frame of reference within cultural—such as ecological, economic, and educational—systems (Mezirow, 1998).<sup>3</sup> For the purpose of this intervention literature review, the systemic form of critical self-reflection of assumptions provides the transformational learning theory foundation needed for teachers to critically reflect on how their beliefs of meeting students' needs, especially students different from themselves, may be deficient resulting in a limited point of view.

### **Intervention Conceptual Framework**

While the researcher's initial conceptual framework, illustrated in chapter one, demonstrated the relationship between salient factors, the following framework demonstrates the relationship between the theoretical frameworks, identified constructs based on the needs assessment findings (cultural competency), and intended outcomes to support a proposed intervention (Figure 3.1). Optimal theory applied to identity development (Myers et al., 1991) is the foundational theoretical component of TFES' equity-based professional development faculty will engage in as a part of this intervention study. The OTAID (Myers et al., 1991) will honor each faculty member's unique implicit bias journey and aligns well with their individual critical reflections of those biases/beliefs (Mezirow, 1998) while acknowledging the intersectionality of identity inherent in the human experience (Crenshaw, 1991; Myers et al., 1991).

An alternative theoretical framework, intergroup contact theory (Allport, 1954), was also considered to ground TFES professional development. Intergroup contact theory situates interventions in the ideas of bringing groups together under optimal conditions<sup>4</sup> to reduce prejudice (Allport, 1954; Pettigrew & Tropp, 2006; Pettigrew, Tropp, Wagner, & Christ, 2011). Prejudice is defined as the pre-judgements individuals have towards other groups including

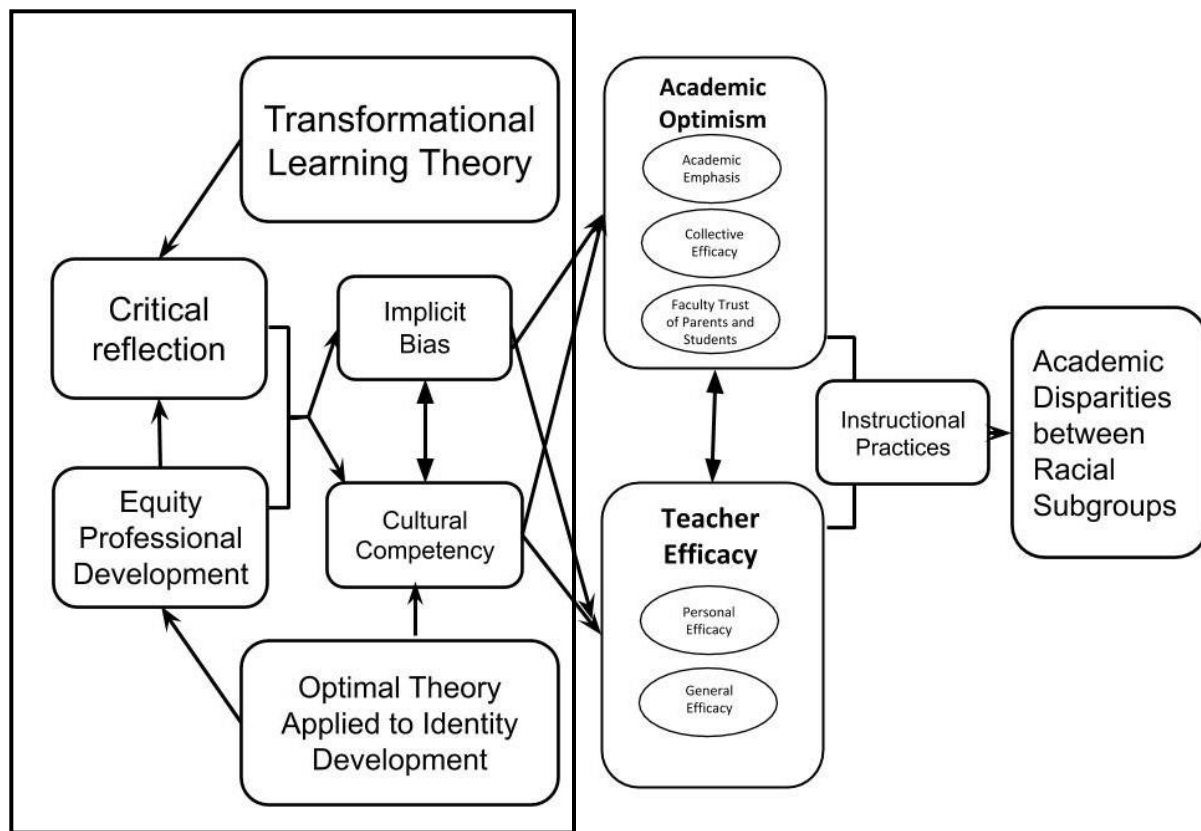
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<sup>3</sup> Other types of critical self-reflection of assumption include narrative, therapeutic, and epistemic (Mezirow, 1998).

<sup>4</sup> Allport's (1954) four optimal conditions included: (1) equal status of the groups in the situation, (2) common goals, (3) intergroup cooperation, and (4) the support of authorities, law or custom (Pettigrew et al., 2011).

stereotypes and generalizations (DiAngelo, 2018). Intergroup contact theory-based interventions have demonstrated statistically significant reductions in prejudicial attitudes towards others (Pettigrew & Tropp, 2006; Pettigrew et al., 2011). Intergroup contact theory was ultimately rejected because of the diversity of staff (40% staff of color) at TFES that currently experience Allport's (1954) optimal conditions within the established school culture. As the staff moves towards improving their personal cultural competency, PD sessions that encourage the group to support the growth of their own and each individual's identity development will capitalize on the norms and open communication established at Tree Frog.

To expand on one's understanding of race, bias, and prejudice, critical reflection (Mezirow, 1997) becomes an important component to include as an intervention to support an individual's analysis of the assumptions they hold within their own implicit bias which influences their cultural competency. Several scholars have posited that interventions to ameliorate implicit bias should positively impact cultural competency (Howard, 2003; Gay & Kirkland, 2003; Milner, 2003). Similarly, positive, or negative, effects of cultural competency have been shown as a factor impacting academic disparities between racial subgroups (Ladson-Billings, 2000). As visualized in the conceptual framework (Figure 3.1), the connection between cultural competency and improved student outcomes is hypothesized in this study through teacher efficacy (JohnBull, 2012) and improved instructional practices such as culturally relevant instruction (Mayfield & Garrison-Wade, 2015). While this framework (Figure 3.1) reflects the researcher's full response to academic disparities between racial subgroups, the outlined section recognizes those components most relevant to the critical reflection of an equity professional development intervention.



*Figure 3.1:* Intervention literature review conceptual framework. The boxed in area illustrates the relationship between each theory (OTAID and transformational learning), intervention (critical reflection and equity-focused PD), and salient factor (cultural competency and implicit bias) reviewed in the literature to support a proposed intervention.

### Intervention Literature Review

The following literature review is an investigation of how teachers' instructional practices within TFES may be improved through an intervention focused on increasing staff levels of cultural competency in response to academic disparities between racial subgroups. This area will be explored through the lens of transformational learning theory to facilitate teachers' critical self-reflection of their existing frames of reference, habits of mind, and points of view (Mezirow, 1997). In order to support the selection of critical reflection as an intervention to positively impact cultural competency, over other salient constructs found in the needs assessment, this review will also briefly synthesize the literature around general and collective teaching efficacy and related improvements to instruction. This examination of scholarship

concludes with an explicitly proposed implicit bias intervention to positively impact teacher-student interactions through increased levels of teacher cultural competency. The chosen intervention, critical reflection through race-reflective journaling, is hypothesized to ameliorate TFES's academic disparities between racial subgroups.

### **Increasing Self-Efficacy**

When an individual believes in their ability to accomplish a specific task, or self-efficacy, they are more likely to approach similar situations with the expectation of similar outcomes (Bandura, 1977; Carleton, Fitch, & Krockover, 2007). In his social-cognitive theory Bandura (1986) further describes self-efficacy beliefs impacting the amount of effort a person believes they must extend to reach specific results. In education, these results, or student outcomes, are predicated on teachers' beliefs about their ability to work with students (Bandura, 1997) and to accomplish that work within a specific context (Tschannen-Moran, Hoy, & Hoy, 1998). In education, there are three main efficacy constructs: (a) personal teaching efficacy, or the belief in one's own ability to positively support student outcomes; (b) general teaching efficacy described as an individual's belief in any teacher to affect positive educational results (Ashton & Webb, 1986), and (c) collective efficacy where school staff believe in their combined ability to positively impact student achievement (Goddard et al., 2000). Additional forms of education-specific efficacy include principal self-efficacy, (Tschannen-Moran & Gareis, 2004; Versland & Erikson, 2017), student efficacy (Sturman & Zappala-Piemme, 2017), however, for the scope of this brief review the researcher focused on teacher efficacy interventions and their impact on student outcomes.

**Teacher efficacy interventions.** Increasing, or decreasing, teacher efficacy is described to occur in one, or a combination, of four ways: vicarious experiences, social persuasion, physiological and emotional states, and mastery experiences (Bandura, 1977; Woolfolk-Hoy &

Spero, 2005). Of these, many educator self-efficacy intervention studies focus on increasing the vicarious experiences, or seeing another demonstrate a skill (Bandura, 1977), and mastery experiences, where teachers experience the successful implementation of a task (Woolfolk-Hoy & Spero, 2005) within a content area and the resulting personal teaching efficacy that may result (Carleton, Fitch, & Krockover, 2007; JohnBull, 2012).

Multiple studies focus on instructional practices and utilize integrated teacher efficacy; for example, Mahler, Großschedl, and Harms (2017) connect pre-service and in-service acquisition of content and pedagogical content knowledge to self-efficacy while Bümen (2009) analyzed the effect of different professional development programs to increase classroom practices on teacher efficacy using the *Teachers' Sense of Efficacy Scale*. Finally, in Iancu, Rusu, Măroiu, Păcurar, and Maricuțoiu's (2018) meta-analysis of interventions impacting teacher burnout, three of the twenty-three studies were noted as specifying professional development focused on teacher efficacy as a mediating factor to support positive teacher and student outcomes. Additional meta-analyses of interventions impacting teacher efficacy were noted by the researcher as having embedded professional development resulting in more positive teacher and student-achievement outcomes (Banks, Dunston, & Foley, 2013; Bruce, Esmonde, Ross, Dookie, & Beatty, 2010; Iancu et al., 2018; Isbell & Szabo, 2015). As these recent studies also focused on how professional development on instructional practices influence teacher efficacy to support student outcomes, this researcher sought to review interventions of instructional practices demonstrating evidence of improved student achievement.

**Improving instructional practices.** Knight and Wiseman (2005) provide a summary of empirical studies after narrowing the field based on described criteria for rigorous research on teacher professional development of diverse students. The authors noted 18 studies met initial criteria for inclusion in their meta-analysis, an additional 20 were analyzed to support emerging



themes as Knight and Wiseman (2005) sought to answer how professional development impacted teacher and student outcomes. A relevant finding to this literature review is that there is very little research connecting professional development content and outcomes for teachers of diverse populations (Knight & Wiseman, 2005). Other findings included multiple studies using teacher self-reports to indicate personal change and classroom improvements; however, the authors' caution that this is not a best practice of intervention research as self-reported changes do not always result in changed classroom behaviors (Knight & Wiseman, 2005).

Basma and Savage (2018) completed a meta-analysis of PD and student reading achievement; their analysis found seventeen studies and, using a weight of evidence protocol, classified seven as high quality and ten as medium quality. Quality was measured based on the appropriateness of the study design, focus, and findings to the research questions (Basma & Savage, 2018). While the Basma and Savage (2018) review was not focused on diverse student outcomes, it does highlight two important discoveries: (a) similar to the Knight and Wiseman (2005) review, many studies do not meet quality or rigor criteria; and (b) two of the seven high quality studies with the greatest effect sizes in the Basma and Savage (2018) analysis focused on reflection as part of the intervention which supports the TFES selection of critical reflection as an intervention.

While TFES seeks to continue to improve the academic disparities between racial subgroups, the diversity of TFES has resulted in implementation of student-centered instruction that honors student interests and a wide range of cultural backgrounds through standards-aligned projects. Based on the previous professional development impacting student achievement syntheses (Basma & Savage, 2018; Knight & Wiseman, 2005), this researcher sought to synthesize culturally responsive instruction literature and determine if the paucity of research focused on both constructs extended to those interventions.

**Culturally responsive pedagogy.** Defined as instruction that supports the learning of students' cultures different than our own through acknowledgement of individual backgrounds or contexts (Gay, 2000; Ladson-Billings, 1995, 2000; Szucs et al., 2019), culturally responsive pedagogy may help ameliorate cultural disconnects within the classroom and result in improved relationships and educational outcomes (Mayfield & Garrison-Wade, 2015; Sampson & Garrison-Wade, 2011).

The study by Mette, Nieuwenhuizen, and Hvidston, (2016) examined the effects of a teacher-driven intervention to develop culturally responsive pedagogical practices in their increasingly diverse district. A focal school was selected in the large midwestern district to follow the school's multicultural committee's that, over three years, engaged in equity, achievement gap, and culturally responsive instruction book studies to support their learning and develop job-embedded professional development sessions for school staff. The researchers sought to answer how staff viewed the professional development based on individual job assignments and perceptions on the greatest successes and challenges to implementing culturally responsive instruction. A researcher-developed survey was sent to school staff with both quantitative, Likert-scale, items and open-ended, qualitative, questions. The mixed methods findings indicated that while teachers did not feel the professional development helped to narrow academic disparities, they did perceive that instruction became more culturally responsive by acknowledging cultural differences. Core content teachers (such as math and reading) were significantly less positive than their non-core peers. Mette, et al. (2016) note that this is likely due to the pressures of standardized testing while also acknowledging research on the need to differentiate professional development.

JohnBull (2012) noted a lack of empirical support for interventions to improve teacher culturally responsive instruction as the relationship to student outcomes is not clear. A search of

the literature revealed that many studies published in the past few years are focused on pre-service or beginning teacher experiences or courses to *develop* cultural responsiveness or competence as a part of their teacher preparation programs (Szucs et al., 2019; Whalen, Titu, Brown, & Roehrig, 2018). The Mette and colleagues (2016) study was unique in that teachers and school leaders developed a grass-roots effort to increase culturally responsive instruction in response to the district's increasing diversity and related academic disparities between subgroups. Interestingly, while student outcomes did increase, the perception of the focal school staff were that culturally relevant instructional changes would not have that impact.

Perhaps the prevalence of pre-service studies acknowledges that in-service teacher contexts are unique and generalizing findings of culturally relevant pedagogy interventions unreasonable. For example, in their discussion and conclusions, Mette et al. (2016) call for school leaders to focus on areas of social justice and to address issues around race and racism within their buildings. Returning to Knight and Wiseman's (2005) summary of professional development for in-service teachers of diverse students, very little of the sparse professional development was focused on culturally responsive instruction.

The focus on pre-service teachers' learning to be culturally responsive prepares them to work in a context different than their own and presents the ideal of increasing teachers' belief that they are capable of effectively impacting student outcomes in those contexts. One such pre-service study was completed by Siwatu (2011) to understand pre-service teachers' culturally responsive teacher self-efficacy (CRTSE) by describing preservice teachers CRTSE beliefs, understanding the types of teacher preparation experiences that informed those beliefs, and noting how preservice teachers describe the influence of those experiences on the development of their CRTSE beliefs. Using an explanatory mixed methods design, the researcher completed two phases of data collection; the first phase was quantitative, and 192 participants completed

demographic information and the CRTSE scale consisting of 40 Likert-scale items focused on how participants perceived their ability to provide specific activities around culturally responsive pedagogy. This data was used to select four preservice teachers on either end of the scale of 93 who had noted an interest in participating in phase two of the study. The resulting eight participants engaged in face-to-face, semi-structured interviews, around nice questions designed to glean information about their coursework, practicum experiences, and perceptions of their professor's qualifications.

Phase one results indicated that preservice teachers indicated higher levels of overall teaching efficacy than beliefs in culturally responsive instructional activities. Qualitative, phase two, interview data revealed that preservice teacher participants experienced less opportunities to observe CRTSE practices compared to those discussed. More importantly, those interviewed on the low end of the CRTSE scale described very few opportunities to practice those skills. Siwatu (2011) discusses the importance of Bandura's (1986) description of vicarious (observed) and mastery (practiced) experiences in developing CRTSE and that it is likely many in-service teachers are also in need of the professional learning necessary to develop these skills in their teaching context.

While Siwatu (2011) investigated pre-service teachers' response to culturally responsive teaching experiences on developing the efficacy necessary to implement culturally responsive pedagogy, JohnBull (2012) sought to understand if there was a *relationship* between cultural competency and teacher self-efficacy as separate constructs. Using a descriptive and correlational statistics, the researcher analyzed 600 responses to an emailed Likert-scale survey and found that cultural competency accounted for a "significant portion of both general teaching efficacy and personal teaching efficacy" (p. 138). This provides a proposal for how cultural competency impacts student outcomes: cultural competency impacts both constructs of teacher

efficacy which has been demonstrated to positively affect student outcomes (Ashton & Webb, 1986; Carleton, Fitch, & Krockover, 2007; Woolfolk-Hoy & Spero, 2005). What is important to note is that in diverse contexts, and in terms of ongoing achievement disparities at TFES and other school contexts throughout the country (Paschall, Gershoff, & Kuhfeld, 2018), teacher beliefs in their ability to impact student outcomes may differ when students are disaggregated by racial subgroup. JohnBull's (2012) study fills that gap by highlighting the need for cultural competency to be considered when intervening in diverse contexts.

### **Understanding and Developing Cultural Competency**

The cornerstone of a teacher providing culturally responsive pedagogy is first having a high level of cultural competency where one positively responds to, and supports, those different than themselves (JohnBull, 2012; Mayfield & Garrison-Wade, 2015; Szucs et al., 2019). So, while culturally responsive instructional practices can be presented to teachers through professional development sessions, without a high level of cultural competence, teachers are more likely to be compliant in their implementation efforts than demonstrating a true understanding of how students of color are impacted by historic inequities, underrepresentation (Mayfield & Garrison-Wade, 2015), and, according to Ladson-Billings (2000), racism. Conversely, when teachers demonstrate high levels of cultural competence, they develop an understanding of the uniqueness of their students and subsequently provide culturally responsive pedagogy (Kozlowski, 2015; Ladson-Billings, 2000; Mayfield & Garrison-Wade, 2015). In consideration of the connection between cultural competence/culturally responsive instruction and teacher efficacy (JohnBull, 2012), along with the understanding that cultural competence must be developed through an understanding of personal bias (Mayfield & Garrison-Wade, 2015), the following reviewed interventions focus on challenging one's *frame of reference*

concerning instruction of diverse students through various forms of reflection, necessary component of transformational learning (Mezirow, 1997, 1998).

**Implicit bias interventions.** As an underlying factor of cultural competency, implicit bias, or an unconscious belief, can reinforce negative stereotypes, lower educator expectations, and contribute to reduced student achievement outcomes (Jacoby-Senghor et al., 2016; Ladson-billings, 2000; Mayfield & Garrison-Wade, 2015). Understanding and acknowledging the presence of one's implicit biases is important to consciously counteracting them; intervention structures to facilitate the reduction of negative bias vary widely and may not provide lasting effects unless personal awareness is paired with personal, and structural, *transformation* of beliefs within the environment (Vaught & Castagno, 2008).

**Personalizing bias.** Whitford and Emerson's (2019) school-based study focused on the racial disparities of student discipline acknowledging teacher implicit bias as an underlying factor. The researchers sought to ascertain if improving the empathy of pre-service White teachers would decrease implicit biases towards Black students. Empathy is a factor supporting teacher consideration of their student's experiences and develops ones' cultural competency (Whitford & Emerson, 2019).

The authors employed a control-group design; half of 34 White pre-service teachers were randomly assigned to a control group and half to an experimental group (Whitford & Emerson, 2019). The Implicit Association Test (IAT) was provided to students to assessed pre- and post-measures of bias with the experimental group receiving an empathy intervention (reading the personal explicit racism experiences of Black peers) immediately in-between the two. Instead of the empathy activity, the control group read and wrote about a technology integrated science unit. Using an analysis of covariance to test the resulting data, the researchers found no pre-test statistical difference between the groups; however, post-test data found statistical significance

with empathy training on the experimental group while acknowledging the small sample size and unknown future effects of empathy intervention on teachers' implicit biases (Whitford & Emerson, 2019).

While the IAT is a well-known measure of implicit bias, the focus at TFES is reducing implicit bias to increase cultural competency. This level of intrinsic change necessitates a longer intervention between pre and post tests and a focus increasing beliefs along a continuum that may not be reflected within the IAT. Whitford and Emerson (2019) note as a limitation that their study did have follow up measurements and it is unknown if the immediate, post intervention, reduction in implicit bias as measured by the IAT resulted in behavioral change. By utilizing critical reflection as an intervention over time, measurements along a cultural competency continuum may demonstrate the transformational learning (Mezirow, 1997; 1998) needed to impact student outcomes.

Also using the IAT, another recent study examined the effectiveness of common interventions and procedures used to increase awareness and acknowledgement of implicit bias by testing two current theories: (a) that individuals are not aware of their implicit biases and need to gain awareness and (b) that individuals are not willing to share their biases due to social desirability (Hahn & Gawronski, 2019). The researchers completed, analyzed, and discussed six separate studies using variables within and around the IAT including predicting one's results, receiving or not receiving feedback on results, and asking participants to state their nonprejudicial goals and attend to their spontaneous emotional reactions towards people of color.

Hahn and Gawronski (2019) synthesized the results of the six studies through a general discussion followed by implications for future interventions. Interestingly, they conclude that even when an individual is not aware of their implicit bias or is not willing to admit them (the six studies showed inconsistent results to determine which theory was more appropriate), that

discussion around acknowledging one's personal biases, specifically about their spontaneous feelings towards other racial groups, may be the best form of intervention. While the IAT is not being considered as an implicit bias measure for TFES, Hahn and Gawronski's (2019) inference around implicit bias discussions confirms the professional development work occurring at TFES and the inclusion of critical reflection to support additional transformative efforts.

It is difficult work to discuss how one may have developed biases over the course of their lifetime that impact, or even harm, others. Hahn and Gawronski's (2019) conclusion highlights that this work needs to be personal and aligns with Lai et al's., (2016) study that there are immediate, but non-sustainable, improvements of negative implicit biases after intervention implementation which then questions if Whitford and Emerson's (2019) study would still demonstrate statistical differences in the intervention group if assessed again after a period of time. Vaught and Castagno (2008) assert that racial bias interventions are ineffective as one typically experiences surface-level, versus transformational, awareness. Interventions need to be intensive and occur over time (Lai et al., 2016). These intervention criticisms were important to this review and reinforced the need for any proposed intervention to be ongoing and utilize the *critical self-reflection of assumptions* process Mezirow (1998) describes as necessary for transformational learning to occur.

***Bias and associated learning.*** An additional consideration when implementing an implicit bias intervention within an educational context is developing the understanding that individuals' implicit biases developed over time, from childhood, and differently, depending on one's context (Caviness, 2018). Images from the media, popular culture, and advertisements often depict more negative imagery towards and with people of color than Whites (Caviness, 2018). The resulting associated learning is defined as "the repeated association of white things with good and black things with bad [that] translates into an attitudinal climate that falsely



elevates the egos of Whites, while devaluing those of Blacks” (Caviness, 2018, p. 28). When considering identity development of TFES faculty through an intervention process grounded in both identity development (Myers et al., 1991) and transformational learning theories (Mezirow, 1997), it is important to understand the foundational concepts children experience and how understanding of others and the self are impacted.

Clark and Clark’s (1947) seminal work investigating the preferences of Black children identifying their skin color, and the skin color of other Black children, with positive or negative statements provides an important foundation for understanding that implicit bias, and associative learning influences, is present across the spectrum of race/ethnicity. Colloquially known as, *the doll test*, Clark and Clark (1947) found that, regardless of a Black child’s specific, light or dark, skin tone, most children in the study indicated a White doll preference when responding to positive statements (the *pretty* doll) and a Black doll preference in relation to negative statements (the *ugly* doll). This research was expanded to investigate emotional factors in the racial identity of Black children with a coloring study (Clark & Clark, 1950). This investigation provided the 150 participants, between the ages of three and five, with a range of colors to choose from and thus allowed fantasy and escapist responses (Clark & Clark, 1950). The researchers concluded that the older participants coloring themselves or other Black individuals a nonsensical color (such as purple) indicates internal emotional conflict and that by the age of five Black children are “aware of the fact that to be colored in contemporary American society is a mark of inferior status” (Clark & Clark, 1950, p. 350).

Researchers Farrell and Olson (1983) recreated this research with 151 Black kindergarten students, 75 males and 76 females, all five years of age. Using eight photograph cutouts of identically dressed and somber-faced male or female children, participants were asked to identify the same-gendered image as themselves (four images each male and female) in relation to a

series of questions. The images included the following skin tones: dark skinned Black, light skinned Black, dark skinned White, and light skinned White. Farrell and Olson (1983) collected the data, analyzed it, and compared it to the Clark and Clark (1947) results. The authors' data indicated that participants indicated more positive racial identity results, both with self-identity and with racial preferences (Farrell & Olson, 1983). Farrell and Olson (1983) acknowledged that their instrumentation (photos versus dolls) differed from Clark and Clark's (1947) study as a limitation; however, they concluded that while Black self-image is still a social concern, the social change that had occurred within the 40 years between study's may be narrowing the disparities in Black racial preferences. Unfortunately, Farrell and Olson's (1983) hope has not resulted in sustained implicit bias improvements as demonstrated by the following recent research and interventions around ameliorating implicit biases demonstrated towards, and by, people of color.

*Associated learning interventions.* Powell-Hopson and Hopson (1988) worked to recreate the Clark and Clark (1940) doll test as a pre-test post-test design. Participants were represented by 105 Black pre-school children and 50 White pre-school children from different school contexts where some classrooms were segregated and other integrated (Powell-Hopson & Hopson, 1988). Integrated classroom students demonstrated a higher percentage of Black doll favorability; however, across contexts a high percentage, 65% of Black and 72% of White, of students demonstrated White doll preferences in pre-test (Powell-Hopson & Hopson, 1988). The researchers then modeled pro-Black choices including reading a story with positive associations for the Black main characters and having students verbalizing positive words choices such as pretty and smart when holding Black dolls. Post-test doll selections found a reversal of preference with 68% of Black and 67% of White students choosing to play with Black dolls (Powell-Hopson & Hopson, 1988). While the time between the tests was only 15 minutes, the

researchers noted the change in preferences as a potentially brief one, Powell-Hopson and Hopson (1988) conclude that all children need to be exposed to positive exemplars of Black individuals and to support positive Black identity development within society.

Jordan and Hernandez-Reif (2009) implemented an intervention study based on Powell-Hopson and Hopson's (1988) work; this researcher was very interested to see if the study had been adjusted to see effects over time and if any differences were found in preschool children's racialized identification preferences after 20 years. Unlike the Powell-Hopson and Hopson (1988) study, Jordan and Hernandez-Reif (2009) utilized a range of skin tones (light and dark skinned White along with light and dark skinned Black) differentiated by gender similar to the Farrell and Olson (1983) study. Of the 40 preschool participants, 20 White and 20 Black evenly distributed by gender, the majority of parents identified as middle class (70% Black and 60% White). Similar to the Jordan and Hernandez-Reif (2009) procedure, students receiving the intervention of a model Black character story did so immediately after the pre-test and before the post-test; the entire session took approximately 10-12 minutes for each child. The control group received the same process with the story having no reference to the main character's skin color. Jordan and Hernandez-Reif (2009) found that the greater spectrum of skin tone choices resulted in more accurate self-identification of the cartoon skin tones to their own but a continuing negative response towards Black skin tones when asked questions such as which figures "looks bad" or has a "nice skin color" (p. 401). Post intervention, Black students responded with more positive responses to these questions, however, White student views did not change. Jordan and Hernandez-Reif (2009) conclude with a call for additional research to identify predictors of young students' racial preferences and negative associations.

It is unlikely that a single short story's positive effect on preschool children's associated responses to race would remain positive. In order to be transformative (Mezirow, 1997) and not

simply an overview of positive responses (Vaught & Castagno, 2008), interventions around race and bias need to be ongoing (Lai et al., 2016). Escayg (2019) investigated current anti-bias curriculum available to support young students' identity development and found that most circumvent discussions around White privilege and White supremacy. While beginning anti-bias and anti-racist discussions with young children may support a more inclusive future understanding the systemic racism reality people of color face, without developing an age-appropriate direct discussion, this researcher believes it is naïve to think that children will make the connection. Escayg (2019) agrees, noting the apparent belief in the analyzed curriculum is that, "by removing race from the discussion and highlighting children's personal characteristics, along with providing opportunities to discuss intergroup class differences—white children will then somehow organically develop an anti-racist white identity" (p. 12). The author concludes that educators, present and future, need to engage in "sustained self-reflection of their own understandings of race and racism" (Escayg, 2019, p. 16) to begin providing the anti-biased curriculum needed to disrupt inequity. This conclusion is integral to the proposed critical reflection of equity PD at TFES; only through developing an understanding of their own identity, and their response to the identities of others, will TFES faculty begin to demonstrate levels of growth along a continuum of identity development described through the OTAID.

**Microaggressions.** Defined as a brief, typically unconscious, verbal or behavioral response that communicates the devaluing of another based on their race or social status (Berk, 2017a), microaggressions can be seen as the tangible effects of implicit bias from one group to another. Importantly, the lack of intent by the aggressor does not detract from the immediate and cumulative effects of the act towards the marginalized individual; "The microaggression is similar to an assault in that it produces fear, stress, and emotional harm, and may embarrass or intimidate the victim, undermine his or her credibility, and expose vulnerabilities" (Berk, 2017a,

p. 64). This is different from a *macroaggression* where there is conscious intent to harm someone from a group different than our own (Berk, 2017a). Focusing on the unconscious, affective, reactions embedded within the implicit biases we all hold (Maiese, 2017), a microaggression focus within the intervention PD provided to TFES faculty will bring further saliency to aspects of one's identity development and positive improvement to their cultural competency (JohnBull, 2012; Myers et al., 1991). Additionally, the understanding that one's intersectionality of identity can be affected by microaggressions (Berk, 2017a) underscores the theoretical focus of the OTAID model on TFES intervention PD than other options.

***Microaggression interventions.*** In a three-part series Berk (2017a; 2017b; 2017c) systematically leads readers through an understanding of microaggressions, how to intervene against and respond to microaggressions in the workplace, and how to identify and prevent microaggressions in the classroom. While the workplace and classroom are situated in higher education, the information is relevant to the TFES context and faculty as an overview of the problem in relation to interventions around implicit bias in order to improve cultural competency. Additionally, Berk (2017b) explicitly notes that the provided examples of microaggressions are intersectional in nature and can be any combination of underrepresented or marginalized groups. Presented as a “user manual” (Berk, 2017c, p. 95), this three part series is not empirical but rather a call to action for administrators, profession development designers, and the like. It does, however, provide a synthesis of Berk's (2017a, 2017b, 2017c) and other's research for developing microaggression PD interventions that may benefit the implicit bias work occurring at Tree Frog Elementary.

Two recent articles discuss research-aligned interventions to support the understanding of microaggressions and proposed responses to empower those on the receiving end (Diab, Godbee, Burrows, & Ferrel, 2019) and/or those who are committed to supporting social justice efforts

such as White allies and well-intentioned bystanders (Sue et al., 2019). The interpersonal microinvalidations, or undermining the knowledge of targeted groups, or microinsults, where knowledge is simply assumed to be absent, were highlighted as specific forms of microaggressions for marginalized individuals to reframe through ongoing validation as an intervention (Diab et al., 2019). Sue et al. (2019), however, provide a series of micro-*intervention* strategies to use in response an experienced microaggression offense. Additionally, Sue et al. (2019), highlights the environmental function of implicit biases and microaggressions, noting that social media, advertisements, monuments, etc., perpetuate microaggressive biases and stereotypes. This hurtful rhetoric is not solely based on race or any one group context but reflects multiple identities and the intersections therein (Diab et al., 2019). Both intervention studies propose that intentional responses, such as those described (reframing, validation, micro-intervention responses), by targets of microaggressions, allies, and others are actions to counter the immediate negative impact of the offense (Diab et al., 2019; Sue et al., 2019). In other words, these actions *may* result in introspection for the aggressor while providing empowered responses to those receiving or witnessing the microaggression.

***Microaggressions, movement, and emotion.*** Microaggressions and implicit biases are not solely conveyed through verbalizations but also by movement and affective expressions. As part of an embodied approach to cognition, where movement, thought, and emotion are integrated (Shaw, n.d), our implicit biases and/or microaggressions may be exposed through our emotional reactions to situations, through unconscious movements such as paying more attention to one group over another (Gilliam, Maupin, Reyes, Accavitti, & Shic, 2016), or through other forms of enactive language (Di Paolo, Cuffari, & De Jaegher, 2018). Similarly, Maisie (2017) discussed the confluence of cognition, emotions, and implicit biases in her presentation of affective *reframing*.

Affective reframing refers to changing one's frame of reference, within Mezirow's (1997) transformative learning theory, through the addition of an enactive view of cognition. Thompson (2007) describes enactive cognition as sense making and an integral aspect of one's whole body engagement with the environment. Individuals actively generate meaning and, in doing so, Maiese (2017) argues, we experience emotional reactions through the mind *and* body. This is an important aspect of transformative learning in that *expecting* physical reactions to emotional work supports the critical reflection necessary to reframe one's point of view (Maiese, 2017; Mezirow, 1998). To this end, the highly personal work of transformative learning is suggested to occur through interpersonal interactions and Maiese (2017) provides examples of interactions where we experience the feelings of others, termed *emotional exposure*, with interactive activities such as storytelling. The TFES faculty will surely experience a range of emotions during the equity PD aspect of the proposed intervention as they grapple with issues of race, identity, bias, oppression, and the like within their identity and the identity of others. Thus, acknowledging the emotional connection to personal transformation (Maiese, 2017) is important to this researcher's intervention focused on critical reflection of equity PD and aligns with Mezirow's (1997; 1998) transformative learning theory.

### **Critical Reflection as an Intervention**

When considered as an intervention, *critical* reflection is operationalized as ones' analysis of their beliefs and biases, and the sociocultural and political conditions that developed them, leading to a reform of actions in support of educational and social justice (Gorski & Dalton, 2019). This self-analysis occurs through the provision of prompts to begin the critical reflection process. The design of critical reflection as an intervention is malleable with a variety of strategies, types, and intensities to support educational equity (Gorski & Dalton, 2019; Liu, 2015) and improve instruction (Durden & Truscott, 2013; Milner, 2003). Examples include

embedded and non-embedded responses to experiences, prompts, and discussions that span a range or continuum of depth in terms of equity and/or social justice (Gorski & Dalton, 2019; Liu & Ball, 2019).

For TFES, self-reflection of one's implicit biases should subsequently strengthen levels of cultural competency (Howard, 2003; Gay & Kirkland, 2003; Milner, 2003). Given the previous implicit bias/equity professional development TFES faculty have engaged in, and the personal transformation necessary for staff to continue moving along a continuum of cultural competency, critical reflection as an intervention makes the most sense to this researcher for TFES participants. The following studies provide examples of critical reflection in practice and a method for staff to capture their transformational work (Mezirow, 1998).

Critical reflection's connection to development of cultural relevancy was investigated by Durden and Truscott (2013) through three case studies of pre-service teachers enrolled in an elementary teaching program. Each case study consisted of an individual interviewed three times (approximately one-hour each) over ten months in addition to analyzing participants' course-required, written reflections (from different professors) as part of their education program. The researchers found two main themes: reflecting beyond the classroom, or considering factors that underlie current instructional practices, and that culturally relevant pedagogy requires critical reflexivity, that is the critical connections participants made about what racial influences impact a school context *and* how to mitigate them through instructional decisions. Durden and Truscott (2013) conclude with the recommendation for teacher preparation programs to ensure provision of cultural experiences and, opportunities to critically reflect on them, to pre-service teachers to develop the skills necessary to support every student. While this study focused on case studies of three pre-service teachers completing course-related written reflections in contexts different than TFES, practice of critical reflection stands out as a method of connecting a teacher to their



instructional context that would then influence their identity development and understanding of others as noted in the OTAID model (Myers et al., 1991; Sevig, Highlen, & Adams, 2000).

The variety of self-reflection, critical reflectivity, reflection, and critical reflection activities in multicultural and social justice course assignments was the focus of Gorski and Dalton's (2019) qualitative critical content analysis of assignment descriptions. Using snowball sampling, the authors collected 60 syllabi from multicultural and social justice teacher education (MSJTE) courses. The authors narrowed the syllabi to those with assignments requiring different types of reflection which they defined as "purposeful consideration of learners' beliefs and actions" (p.4). Each researcher identified assignments they felt met this definition separately, then collaborated, and came to agreement on 43 assignments from 37 syllabi. As the researchers reviewed, coded, discussed, and came to consensus on which assignments required critical reflection compared to those that just required reflection, and expanding on previous approaches to delineating types of critical reflection research, the following typology of approaches to reflection in MSJTE courses developed (see Table 3.2). The authors note that outside of the conservative approach and its dangers of encouraging racial assimilation, that liberal reflection approaches are important and a valuable bridge towards critical reflections.

Milner (2003) describes race-reflective journaling as a potential method of implementation for teachers' critical reflections to capture the racial influences inherent in their work and in their personal lives. It is further suggested that these written reflections be supported through provided prompts and developed typologies (Howard, 2003; Milner, 2003). Gay and Kirkland (2003) caution that critical reflection of cultural consciousness factors should be

Table 3.2

*Typology of Reflective Approaches to Reflection in Multicultural and Social Justice Teacher Education*

<b>Approach (level)</b>	<b>Definition</b>	<b>Traits</b>
I. Amorphous “cultural” reflection (Conservative)	To reflect broadly on one’s understandings of “other” cultures, usually in an essentializing way	<ul style="list-style-type: none"> <li>• Vague focus on “culture”</li> <li>• Danger of confirming stereotypes of “the other”</li> </ul>
II. Personal identity reflection (Liberal)	To reflect on one’s personal identities without grappling with the implications of difference or power or how identities influence one’s worldviews or understandings of justice	<ul style="list-style-type: none"> <li>• Focus on “diversity” but not on justice or oppression</li> <li>• Lack of connection between identities and their impact on teaching practice</li> </ul>
III. Cultural competence reflection (Liberal)	To reflect on one’s teaching practice with “diverse learners” in light of one’s identities and life experiences	<ul style="list-style-type: none"> <li>• Cultural competence framing related to teaching “diverse learners”</li> <li>• Absence of reflection on beliefs or actions related to oppression against or advocacy for marginalized students</li> </ul>
IV. Equitable and just school reflection (Critical)	To reflect on one’s preparedness and willingness to be an agent of social justice change in a school context	<ul style="list-style-type: none"> <li>• Explicit examination of positionalities and responsibilities related to oppression and liberation in schools</li> </ul>
V. Social transformation reflection (Critical)	To reflect on one’s preparedness and willingness to be an agent of social justice change in and out of school contexts and to reflect on the areas of continued growth one needs to be an agent of social justice change	<ul style="list-style-type: none"> <li>• Incorporation of forward-leaning reflection related to continued needs for development as social justice advocates</li> </ul>

*Note:* Adapted table from Gorski and Dalton (2019) p. 7.

couched in a realistic situation and supported through realistic experiences. In consideration of TFES, an elementary context unlike most in the district, this is important advice when designing a critical reflection intervention using Gorski and Dalton’s (2019) typology. The resulting race-reflective journal prompts (Milner, 2003) should be designed to elicit authentic reflections

teachers have or are experiencing (Gay & Kirkland, 2003) as they move through Mezirow's (1997) transformative learning process.

### **Summary**

Teachers' beliefs in their ability to positively impact student outcomes, or for their school community to do the same, are impacted by the implicit beliefs held about students and the context in which they work (Gay & Kirkland, 2003; Vaught & Castagno, 2008). One's level of cultural competence is similarly affected by these factors and, in the context of Tree Frog Elementary, a salient construct that may be improved through focused intervention. Cultural competency interventions impact teachers' understanding of cultural differences (Mayfield & Garrison-Wade, 2015; Szucs et al., 2019), and, by extension, encourage reflection on one's implicit and explicit biases (Gay & Kirkland, 2003; Durden & Truscott, 2013). Teacher reflection on examples counter to negative, stereotyped, descriptions of groups different than their own may change their frame of reference (Mezirow, 1997) and improve negative implicit biases. Several authors argue that critical reflection activities provide a unique focus of equity and one's implicit biases and opportunities for improving cultural competency that, otherwise, would not be possible (Howard, 2003; Milner, 2003; Shim, 2017). In fact, as discussed by Vaught and Castagno (2008), it is not enough to provide teachers professional development that merely acknowledges or makes one aware to racial inequities; instead, implicit or anti-bias training should investigate the systemic nature of racialized achievement disparities and provide teachers ways to understand (reflect upon) their position in that system.

As an intervention, critical reflection can be layered onto other school improvement efforts that may be in place at TFES by asking staff to respond to reflective prompts (Milner, 2003; Gorski & Dalton, 2019); reflective activities are most effective when embedded into teachers' day to day instruction (Camburn & Han, 2017) and supported through facilitation

(Milner, 2003). Additionally, as indicated in this review’s conceptual framework, critical reflection is a significant aspect of transformational learning theory (Mezirow, 1997, 1998). In consideration of the reviewed interventions, context-specific problem of practice, and intervention theoretical framework (Figure 3.2), this researcher chose critical reflection of equity-focused professional development to improve cultural competency, through the underlying factor of implicit bias, in an intervention study with TFES staff.

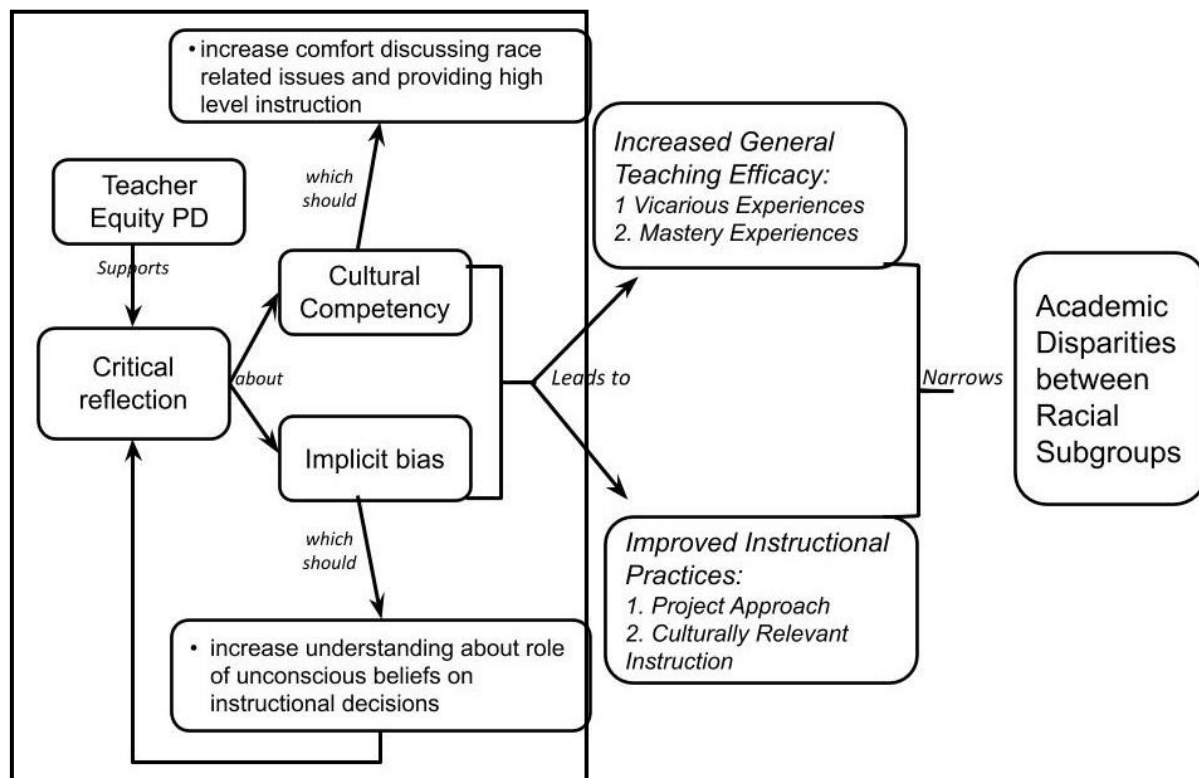


Figure 3.2: Intervention Framework. The boxed-in area describes the proposed intervention (Teacher Equity PD supporting implementation of critical reflection focused on cultural competency and implicit bias) and the potential change in participants’ beliefs that should increase as a result.

This intervention proposes to initially reduce implicit bias and increase cultural competency within the context of this study as indicated within the outlined section of the intervention framework (Figure 5). Long term, and outside the proposal of this dissertation, follow up research would examine if positive cultural competency improvement supports increased general and collective teacher efficacy. As staff preconceptions around diverse

students change, based on an initial intervention targeting implicit bias, beliefs in their ability to meet diverse needs should increase. These beliefs should further evolve as teachers observe mastery experiences with culturally competent high expectations provided to all students. This is important, for while this intervention focuses on teachers, the ultimate goal is to narrow or eliminate the academic disparities experienced between *students'* racial subgroups.

## Chapter 4

### Intervention Procedure and Program Evaluation Methodology

Chapter two delved into factors underlying racial disparities between student subgroups by surveying teachers and interviewing principals at three schools surrounding the then unopened Tree Frog Elementary. In addition to these schools transferring the majority (~85%) of TFES students, several teachers and instructional assistants were also hired from each focal school, approximately 25%, or 18, in total. Most of these faculty were offered positions before being provided the needs assessment survey in their respective contexts. The interview process to work at TFES included questions about equity and beliefs regarding student learning. Finally, once the school opened, the researcher emphasized to every staff member that they were *chosen* to work at TFES<sup>5</sup>.

These interview and onboarding processes supported the development of a uniquely trusting relationship between the researcher and TFES faculty. This burgeoning climate and culture of trust was fostered through the school faculty's collective engagement in required and opt-in equity/implicit bias training from the school's inception.<sup>6</sup> Informal surveys (January 2020) and other data, such as a lack of staff turnover (2019-2020 turnover rate of 2.7% reflecting two teachers who moved out of state), provided some evidence of the high level of trust and a

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<sup>5</sup> *Chosen* at TFES is more than being selected for a specific position. The moniker relates to the specific hiring process that moved beyond qualifications to see the potential of a candidate to engage in opening a school focused on equity and student-voice and choice as a major part of the instructional process. Over the first semester of the school's existence, being *#Chosen* became a part of staff member's TFES (as much or more than a mascot). Moreover, it acknowledged that while the researcher, as the principal, chose each staff member, they also chose the change and vision of the researcher. Thus, being chosen is a reminder that we, as a community, are working towards core beliefs that include an equitable educational experience and outcome for every student.

<sup>6</sup> Opt-in refers to TFES faculty joining optional professional development in contrast to all other PD that is required. During the 2019-20 academic year, optional PD was in the form of the following book studies: *Despite the best intentions: How racial inequality thrives in good schools* (Lewis & Diamond, 2015); *White fragility: Why it's so hard for White people to talk about racism* (DiAngelo, 2018); and *Between the world and me* (Coates, 2015). Additionally, *The 1619 Project* (Hannah-Jones, 2019) was an option Summer, 2020.

positive culture at TFES. It is this climate and culture that allowed a study regarding decreasing implicit bias and increasing cultural competency possible in TFES's second year.

As noted in the chapter three intervention literature review, to positively affect educators' cultural competency, an investigation into one's implicit biases is necessary (Gay & Kirkland, 2003; Durden & Truscott, 2013; Mayfield & Garrison-Wade, 2015; Szucs et al., 2019). This work is important as a teacher's beliefs about their students has direct impacts on those students' achievement (Gay & Kirkland, 2003; Vaught & Castagno, 2008). Academic outcomes are historically disparate between racial subgroups (Coleman et al., 1966; ESSA, 2015; Gardner, 1983; NCLB, 2001) and a current issue at TFES. In response to this problem, the researcher built upon current TFES equity-focused professional development practices to add critical reflection activities and journaling as an intervention as described in the logic model, below (Figure 4.1). This intervention was designed based on factors impacting student outcomes at TFES, identified through the discussed needs assessment, and research on cultural competency and implicit bias interventions.

To enact a study based on this need, the research design of a new intervention, the study methodology, and a full description of the procedures, instrumentation, data collection, and data analysis are described in this chapter. The outcome evaluation methodology, analyzing how the intervention results will answer the research questions and impact proximal outcomes (Mertens, 2018), includes TFES context-specific information and process evaluation procedures detailing the fidelity of intervention activities (Dusenbury, Brannigan, Falco, & Hansen, 2003). These outcome and process evaluation procedures supported the intervention's implementation and subsequent chapter's discussion of the study findings. In sum, the purpose of this study was to determine the extent to which equity professional development and critical reflection journaling intervention change participants cultural competence.

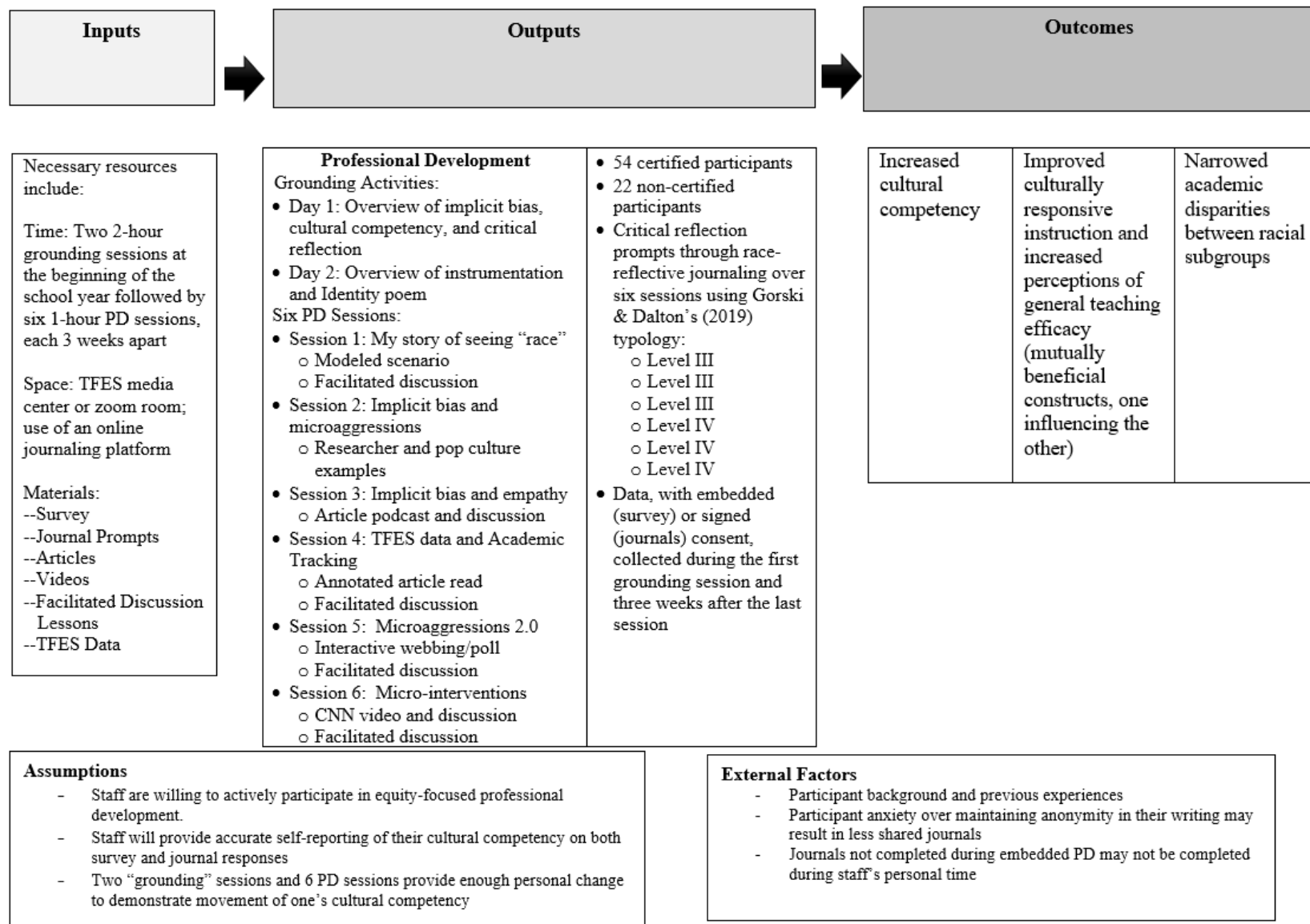


Figure 4.1. Logic Model: Academic disparities exist between racial subgroups with teachers describing low levels of cultural competence. Staff need support understanding and mitigating implicit biases to raise cultural competency and impact student achievement.



## **Research Questions**

This intervention study was guided by the above-stated purpose and framed by the following outcome evaluation research questions:

RQ 1. In what ways do Pre-K-5 staffs' critical reflection approach levels change over time when responding to a race-reflective journaling prompt immediately following equity professional development sessions?

RQ 2. How do Pre-K-5 staffs' reported levels of cultural competency change after engaging in critical reflection and equity professional development?

The researcher hypothesized that the addition of race reflective journaling to equity-focused professional development, using prompts aligned to critical reflection, would positively increase staff levels of critical reflection and cultural competency.

The following research questions were used to evaluate processes within the study:

PQ 1. To what extent did the participants engage in the intervention according to the intervention plan?

PQ 2. How did the designed intervention activities meet the intended outcomes?

## **Research Design**

For the outcome evaluation, this study employed a quasi-experimental, embedded mixed method design (Creswell & Plano-Clark, 2011) to provide activities hypothesized to decrease implicit biases and increase cultural competency as proximal outcomes shown to positively impact student outcomes and narrow disparities (JohnBull, 2012; Mayfield & Garrison-Wade, 2015; Szucs et al., 2019; Whitford & Emerson, 2019). An embedded, quasi-experimental design refers to a quantitative intervention study, without randomization, that includes qualitative data to enhance understanding of the findings (Creswell & Plano-Clark, 2011). By using mixed methods, the researcher endeavored to add qualitative journal responses in joint displays to

augment the quantitative pre-test post-test design results for RQ2 (Creswell & Plano-Clark, 2011). The first research question was answered using qualitative findings alone.

Effective implementation of this study was assessed through process evaluation indicators of fidelity measured throughout the intervention sessions (Dusenbury et al., 2003). The following process evaluation indicators of fidelity will be applied to specific components of the intervention process to evaluate the expected impact of the intervention: dosage (attendance), responsiveness of the participant (engagement), and project implementation (clearly planned and delivered activities; Dusenbury et al., 2003; Zhang et al., 2011).

## **Method**

This section describes the methodology for this quasi-experimental, embedded mixed methods, study. The sections include a description of the TFES context, participants, recruitment procedures, the role of the researcher, and instrumentation.

### **Context**

This intervention study occurred at a highly diverse and affluent elementary school (TFES) located in a southwest state in the U.S.; approximately 12% of students qualify for free or reduced lunch and 76% identify as students of color<sup>7</sup>. During the 2020-2021 academic year, the school served approximately 803 pre-kindergarten through fifth grade students with 82 faculty members. Faculty at TFES included administrators, office staff, classroom teachers, special education and intervention teachers, academic coaches, enhancement teachers, English as a Second Language teachers, a media specialist, and a school counselor; 50% of staff identified as individuals of color and 92% were female.

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<sup>7</sup> For this study, student of color refers to anyone not identified as White and non-Hispanic as indicated by parents' enrollment paperwork.

## Participant Recruitment

Participant recruitment for end-of-intervention volunteer submissions of race-reflective journals occurred via an email (Appendix E) sent three times over a three week period. As principal of TFES, all faculty knew about the researcher's dissertation process and the equity-focused intervention connected to the school's 2020-21 professional development plan. Those staff electing to share their anonymous journals sent their IRB consent directly to the researcher's advisor, Dr. Ranjini JohnBull, prior to the start of the intervention. When soliciting the actual submission of journals after the conclusion of all intervention sessions, faculty were reminded that they could still choose to withdraw from the study.

Recruitment for faculty participation in the quantitative data collection of the student was embedded in the pre- and post-test Qualtrics survey (Appendix F). To access the survey, provided during the first grounding day and two weeks after the last session, faculty needed to select *agree* to the following statement: *By completing this survey or questionnaire, you are consenting to be in this research study. Your participation is voluntary, and you can stop at any time.* Additionally, the researcher reiterated that the staff could select *disagree* anonymously and without any negative consequences.

**Participants.** The full faculty (n=82) participated in equity-focused PD with race-reflective journaling. TFES's school-wide professional development plan included topics on implicit bias and anti-racism; critical reflection was an addition to this current PD plan. Data was collected from volunteer participants who agreed to share related study materials. Table 4.1 provides participant information for each aspect of the survey data collection process. Additionally, 28 participants, or 34%, consented to anonymously share their race-reflective journals before the start of the intervention study. After the last session, 26, or 32%, sent their journals to the researcher's advisor for inclusion.

Table 4.1

*Pre- and Post-Survey Participant Information*

	Accessed	Consented	Did not provide unique identifier	Did not answer any items	Did not complete all items
Pre-Survey	82	82	2	3	1
Post-Survey	76	60	5	1	1

**Role of the researcher.** The researcher and Dr. JohnBull co-facilitated the two initial grounding sessions. The six subsequent professional development sessions were solely provided by the researcher. Qualtrics data was collected electronically by the researcher. Staff who volunteered to share their journals were provided directions on how to anonymize their submissions and submit to Dr. JohnBull, who then deidentified the email information, and sent the anonymous journals directly to the researcher.

As principal of TFES, the researcher had a unique positionality with increased risk of coercion when asking staff to participate in intervention research involving the collection of data, even when that data is anonymous. Support of the researcher's advisor, Dr. Ranjini JohnBull, as co-presenter in intervention grounding activities helped create a relationship between her and the faculty so that IRB consent and journal submissions were sent to a person in a non-supervisory position.

### **Instrumentation**

The following measures were used to collect the quantitative and qualitative data for this embedded quasi-experimental mixed methods study. The quantitative survey pre- and post-test included educator status (certified or non-certified) as demographic data. Participants were directed to create a unique identifier to include on all data collection instruments. The suggested code configurations included their childhood street, family, or first pet names combined with the last two digits of their birth year or high school graduation year (i.e. Tabby 92).

**Survey.** A 15-item survey was distributed using Qualtrics, an online survey platform, to measure cultural competency which utilized a 6-point Likert scale for participant responses (a rating of one, *strongly disagree*, to a rating of six, *strongly agree*). Selected survey items represent an abbreviated form of Sevig, Highlen, and Adams' (2000) Self-Identity Inventory (SII). This instrument was developed using Myers et al's. (1991) optimal theory applied to identity development (OTAID) model (Appendix A) that works to recognize the intersectionality, or multiple facets, of one's identity (Carbado et al., 2013; Pope & Reynolds, 2017) held by an individual (JohnBull, 2012; Sevig, Highlen, & Adams, 2000). As an individual becomes more aware of their identity, and the inequitable response of society (supporting some and oppressing others), their awareness and response towards themselves and others—their cultural competency—may increase (JohnBull, 2012). The resulting SII measures specific levels of one's multicultural identity development and the corresponding responses they demonstrate (Sevig, Highlen, & Adams, 2000).

Sevig, Highlen, and Adams (2000) completed validation studies of their instrument upon its development. Using other measures, including the belief system analysis scale and tolerance scale, Sevig, Highlen, and Adams (2000) analyzed adherence to the optimal belief system and SII levels, respectively. The authors found content validity through these and other scale correlations; construct validity was found through confirmatory factor analysis interscale correlations (JohnBull, 2012; Sevig, Highlen, & Adams, 2000). Thus, the SII items are aligned to the six levels of identity development described in the OTAID (JohnBull, 2012; Sevig, Highlen, & Adams, 2000; Appendix A) and, through the researcher's theoretical framework, an appropriate measure of cultural competence. As noted in JohnBull (2012), the spirituality component of the transformation level is not a common cultural competency measure. Therefore,

SII items related to transformation were excluded from the final survey instrument measuring TFES faculty's cultural competence.

A later study by Sawyer (2004) also sought to validate the OTAID, through an amended version of the SII, in reflecting the identity beliefs of 148 South African (Western Cape) women of color. Using exploratory factor analysis, inter-scale correlation of the SII subscales, and correlational analysis with the belief system analysis scale, Sawyer (2004) found item validity for the OTAID levels of Immersion, Internalization and transformation but not for Individuation, Dissonance, or Integration. However, it is important to note that Sawyer's (2004) validation study was completed within the context of one province in South Africa, which the author notes is a limitation and prevents generalization of study findings with women of color. Additionally, Sevig, Highlen, and Adam's (2000) instrument reflects the intent of the OTAID to provide a multicultural model of identity development within the unique context of the United States. Unique in that, "The OTAID model posits a developmental process for individuals who have been socialized within American culture in which oppression and its manifestations (e.g., racism, sexism, heterosexism, and ageism) often undermine such feelings of self-worth" (Myers et al., 1991, p. 170). Therefore, while Sawyer's (2004) study noted mixed validity with the SII, the context of the instrument's intention is an important factor and one found at TFES. The abbreviated SII instrument can be found in Appendix F.

**Race reflective journals.** Defined as a method for educators to uncover implicit racial bias (Milner, 2003), race reflections using a critical reflection typology were implemented as an intervention using race-reflective journaling. This method is described by Milner (2003) as an effective way for teachers to "think through their experiences (past and present) around race" (p. 177). Milner (2003) notes that specific question prompts, or a typology of question types, are

more effective than general reflections around race. Thus, the researcher developed specific prompts aligned with a typology of critical reflection (Gorski and Dalton, 2019).

A total of 12 prompts were developed utilizing a cognitive interview process, where individuals engage in verbal processing of each question, providing face validity of each questions' intent (Desimone, & Le Floch, 2004). Three Johns Hopkins School of Education faculty members were interviewed separately via zoom video conferencing. Each interview was recorded, and the researcher captured additional information, such as the participants' confusion or excitement, about each potential critical reflection prompt. Appendix I identifies the 12 items and a synopsis of each interviewee's response. The final six prompts can be found in Table 4.2. Participants will utilize a free, secure, online journaling site to respond to these prompts (Penzu, n.d.).

### **Procedure**

The intervention provided to TFES faculty occurred over a five month period during the beginning of the academic year workdays (two days, two hours each) and six full faculty meetings, each scheduled for an hour on district workdays or asynchronous days<sup>8</sup>. Meeting dates were planned into 40 minutes of PD and 20 minutes of journaling (see Table 4.2) that included a 5 minute review activity at the start of each session. Due to the Covid-19 pandemic, all intervention activities occurred online using Zoom (n.d.). While planned for an hour, an unexpected advantage of meeting only on district workdays or asynchronous days was that there was no hard stop time which allowed discussions to continue as directed by participants. All school staff were required to attend each professional development session.

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<sup>8</sup> Due to the Covid-19 global pandemic, district schools taught a combination of online and face-to-face classes. Additional *asynchronous* learning days were added to school calendars where students learned online without any synchronous, or live instruction, to support school staff planning and professional learning activities.

## **Intervention**

Critical reflection as an intervention is an additional component to current implicit bias work being employed at TFES. Throughout the 2019-2020 school year, TFES engaged in whole staff equity PD connected to school data analysis. Additionally, approximately half of faculty (35 certified and non-certified staff) engaged in one or more optional anti-racism/implicit bias book studies throughout the year. The addition of a critical reflection intervention through race-reflective journaling reflected a part of faculty's regular workday. Gay and Kirkland (2003) and Camburn and Han (2017) note that embedding implicit bias critical reflection into the workday, connected to authentic day to day experiences, increases the overall feeling of relevancy for implicit bias/equity PD participants. Additionally, several scholars (Howard, 2003; Milner, 2003; Shim, 2017; Vaught and Castagno, 2008), have specified that reflecting on one's experiences and feelings around race and improving cultural competency has been shown to be more effective than implicit bias PD alone.

The critical reflection intervention began at the beginning of the school year with two grounding sessions to provide background information necessary for faculty to effectively access the purpose of future activities and to prepare materials for race-reflective journaling. Professional development activities were then provided over six sessions throughout the first semester. Table 4.2 provides an overview of each session's planned activities, dates, time of PD, and time for journaling.

**Grounding day one.** This day began with faculty introduced to Dr. John Bull and having the opportunity to complete the cultural competency pre-intervention survey (SII; Sevig, Highlen, & Adams, 2000). Staff were then provided an overview of the intervention process including information on implicit bias, cultural competency, and microaggressions. The Zoom (n.d.) polling feature was used to informally assess background knowledge of these terms and the



Table 4.2

*Description of Planned Intervention Session Activities*

Session Activities	Topic/Content	PD Duration	Journal Prompts	Time for Journaling	Theory Alignment
Grounding Day 1: Overview of implicit bias and cultural competency; completion of SII survey; set up of Penzu journal	Overview of implicit bias and cultural competency	2 Hours	What are your initial thoughts around journaling and critical reflection?	10 Min.	OTAID
Grounding Day 2: Overview of critical reflection and writing/sharing of Identity Poem in small groups	Overview of critical reflection and identity Poem	1.5 Hours	What reflections do you have after participating in this session?	20 Min.	Transformative Learning and OTAID
PD Session 1: Researcher shared personal story; facilitated discussion	My story of “seeing” race	40 Min.	Reflect on how your life experiences, beliefs, perceptions, and education have led to your current ideas about working with diverse student populations.	20 Min.	OTAID
PD Session 2: Whole group Pop culture & researcher microaggression examples/discussion	Implicit bias and microaggressions	40 Min.	What does oppression mean to you? How does implicit bias contribute to that definition? What can you do about it?	20 Min.	OTAID
PD Session 3: Podcast; facilitated whole group discussion	Implicit bias and empathy	40 Min.	How do you identify racially or ethnically? Describe what that identification means to you, now, in this environment? Does the description you provided meet your ideal? Why or why not?	20 Min.	OTAID
PD Session 4: School data analysis; partial article read; silent share using chat; facilitated small group discussion	TSES data dive and academic tracking	40 Min.	How do I, as an educator, come to understand the educational experiences of others? How do I ensure all students feel a sense of worth and meet their potential?	20 Min.	Transformative Learning
PD Session 5: Discussion reviewed microaggressions and introduction of micro-interventions; small group discussion of Sue et al.’s (2019) micro-intervention descriptions applied to scenarios	Microaggressions and Micro-interventions	40 Min.	Is it important to discuss microaggressions “in the moment?” Why or why not? Describe a time when you took the opportunity to respond, or a time you wish you had?	20 Min.	Transformative Learning and OTAID
PD Session 6: Implicit bias videos (CNN) were shown followed by facilitated discussion; staff attended in three different groups	Empathy and Identity Literacy	40 Min.	Am I willing to speak about race to support those who might not be present in the conversation? Are there spaces where I would be less likely to express injustices of race?	20 Min.	Transformative Learning and OTAID

chat function was employed to ensure faculty engagement. Staff were presented the question “Would anyone like to share their thoughts about why critical reflection is a natural next step?” and provided the opportunity to share with the group. The session ended with step-by-step directions to staff on how to create their free Penzu (n.d.) journal account, where to use their unique, anonymous, identifier within their journal entries, and asked to respond to the following prompt as a baseline activity: What are your initial thoughts around journaling and critical reflection?

**Grounding day two.** This second grounding session divided the full faculty into three smaller groups (average  $n = 27$ ) and provided them an overview of *identity* to support ongoing collegiality and focus on various dimensions of self. The same content and process was repeated for all three groups. Dr. JohnBull led staff through the creation of individual identity poems; every participant had been provided an article (Christensen, 1997) on this form of poetry and a variety of templates the previous day. Additional time was provided during the session to review these identity poem materials, hear examples created by the researcher and Dr. JohnBull and, write their own. Staff were then randomly placed into small groups of three to share their poems, if they’d like, then groups of six were created by joining two existing smaller groups. Finally, all returned to the main room with the opportunity for volunteers to share. The session concluded with faculty responding to a second, general, journal prompt: What reflections do you have after participating in this session?

**Session one: My story of seeing “race.”** The researcher shared an example of the first time she heard the term “racist” and realized that identification by physical differences could be seen negatively. This was an exercise the researcher participated in at a previous professional development and is a question posed by DiAngelo (2018). Faculty were then be given time to

think about, and write if they wanted, their own story to voluntarily share in small groups and/or with the full group. The session ended with the first critical reflection prompt: Reflect on how your life experiences, beliefs, perceptions, and education have led to your current ideas about working with diverse student populations (Gorski & Dalton, 2019). Gorski and Dalton (2019) note this as a “bridge” question to move teachers towards critical reflection.

**Session two: Implicit bias and microaggressions.** This session focused on the introduction of microaggressions including the definition, examples, and consequences. This PD and relevant clips will include a brief discussion around the intersection of movement and thought to explain why our implicit biases may result in verbal or facial expressions that maintain racial power dynamics. The researcher provided two contemporary movie clips to demonstrate this phenomenon (the library scene of the movie *Hidden Figures* and the full trailer for *American Son*; Appendix G for clip links). The researcher then described one of her experiences (specifically, as a female principal, parents and county individuals who are unaware of who is the principal assume it to be one of the males I am standing next to rather than asking) and opened the room for staff to share their relevant experiences. The PD ended with two more short movie clips (the ending of *Independence Day* and part of *Blank Panther*; Appendix G) that demonstrated positive association learning examples towards people of color (Jordan & Hernandez-Reif, 2009; Powell-Hopson & Hopson, 1988). The exercises provided in this session align to three intervention processes: a) overt examples of microaggressions in practice to illuminate TFES faculty to the media, advertisements, and other sources reinforcing microaggressions (Caviness, 2018), b) providing these examples may have resulted in an empathy response shown to support understanding of racism and lower implicit biases (Whitford & Emerson, 2019), and, c) providing positive associated learning examples to reinforce that the

influence we experience is systemically-generated (Jordan & Hernandez-Reif, 2009; Powell-Hopson & Hopson, 1988). The session ended with the second critical reflection prompt: What does oppression mean to you? How does implicit bias contribute to that definition? What can you do about it?

**Session three: Implicit bias.** The researcher provided a Pre-K teacher/student study on paper and/or electronically for faculty to follow along with an audible podcast (Gilliam et al., 2016; National Public Radio, 2016; Appendix G). A you tube video about the same study was also shown; the multiple modalities (article summary, podcast, video) were used to support greater understanding of complex content (Hardiman, 2012; Picciano, 2009). This study demonstrated the greater amounts of assumed negative behaviors attributed to Black boys by both Black and White Pre-K teachers, even when those educators are unaware of their heightened focus. The teachers' focus was not measured by self-report but instead by tracking eye movements (Gilliam et al., 2016). This is an appropriate follow up to the discussion of microaggressions and implicit bias (seen through affective movement and verbal responses) participants experienced in session two. The researcher then facilitated a short whole-group discussion of how implicit bias is all around us from a young age. The session ended with the third critical reflection prompt: How do you identify racially or ethnically? Describe what that identification means to you, now, in this environment? Does the description you provided meet your ideal? Why or why not?

**Session four: TFES data dive and academic tracking.** One the foundational premises of a professional learning community is the transparent sharing of the school's data (DuFour, & DuFour, 2013). This session engaged the faculty in analyzing data specific to their context, and compared it to district, state, and national data disaggregated by racial subgroups. Specifically,

and without updates to 2019-2020 school data as a result of COVID-19 school closures, faculty were asked, “What is the trajectory of our 5<sup>th</sup> grade students whom we have the most historical data<sup>9</sup>? Faculty were then presented an annotated article (Watanable, 2012) on academic tracking with time to review the highlighted portions and provide a silent share using the chat feature. The researcher then returned to a graph of current 5<sup>th</sup> grader’s past data and asked faculty to consider the following question: *Using the provided school student data, and knowledge of county 6<sup>th</sup> grade math placement practices, what are the projected outcomes of our Black and Hispanic students?* Participants discussed in small groups and given the opportunity to share with the whole group. The session ended with the fourth critical reflection prompt: How do I, as an educator, come to understand the educational experiences of others? How do I ensure all students feel a sense of worth and meet their potential?

**Session five: Micro-interventions.** The researcher engaged the whole group in a review of microaggression types presented in session three followed by time to review and ask questions of Sue et al.’s (2019) micro-intervention strategies and scenarios (Appendix H) emailed to staff the day before the session. Staff were then broken into randomized small groups to work through a scenario before returning to the main zoom room. The researcher used the zoom poll feature to engage the faculty in describing their comfort level with the content (How do you feel after working through scenario one? A) Empowered, B) Supported, C) Uncomfortable, or, D) Resigned. A random group was called upon and given the opportunity to share their thoughts with full faculty. The full process (random small group, poll, whole group share) was repeated

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<sup>9</sup> In March 2019, all schools in the focal district and state closed as a result of the Coronavirus pandemic known as “COVID-19.” All end of grade benchmarks and state assessments were cancelled. As a new school, TFES only had 2019-2020 4<sup>th</sup> and 5<sup>th</sup> grade students’ prior school data and K-5 student’s beginning and middle of year benchmark data. Therefore, at the time of the researcher’s intervention, 2020-2021 5<sup>th</sup> grade data provided the most data-over-time for analysis.

for the other two scenarios. Randomizing all three small groups occurred as a result of anecdotal feedback that staff appreciated speaking with a variety of staff in sessions one through four. The session ended with the presentation of the fifth critical reflection prompt: Is it important to discuss microaggressions “in the moment?” Why or why not? Describe a time when you took the opportunity to respond, or a time you wish you had?

**Session six: Empathy and identity literacy.** This final session was provided to staff signing up for a smaller group (n=~27) session; a total of three sessions were provided, each with the same content. A CNN video (2012) on children’s view of skin color was played. This is an activity similar to the Clark and Clark (1947; 1950) doll test where young children demonstrated a greater affiliation with light or White skin. This is important as, at TFES, student demographics are primarily South Asian. While the original doll test was focused on Black/African American and White students, a range of skin colors have been used in subsequent tests (Jordan & Hernandez-Reif, 2009). While still focused on White and Black/African American dichotomy, the range of skin tones in the CNN video provided a contextual extrapolation opportunity for TFES staff. After watching the video, staff were given several minutes of silent reflection. The group were then be shown the question, “How did this video affect *you*?” and provided the opportunity to respond whole group. This process was repeated with two other questions: (a) How does it [this video] impact your role in education? and (b) How does it [this video] impact how we want students to see themselves (and each other)? The session ended with the sixth critical reflection prompt: Am I willing to speak about race to support those who might not be present in the conversation? Are there spaces where I would be less likely to express injustices of race? (Milner, 2003).

## Data Collection

Data was collected during the first grounding activity, Summer/Fall 2020, and two weeks after the last professional development session, Winter 2020. Using their unique identifier, only participants who completed both the pre and post surveys, and/or provided their anonymous journals, were included in this study's analyses. The data summary matrix demonstrates alignment between the study research questions, construct measurement, data collection, and data analysis (Table 4.3).

Table 4.3  
*Summary Matrix*

Research Question	Constructs	Instrumentation	Data Collection and Timeline	Data Analysis
RQ 1: In what ways do Pre-K-5 staffs' critical reflection approach levels change over time when responding to a race-reflective journaling prompt immediately following equity professional development sessions?	Cultural competency Implicit bias Social justice	Race reflective journals (Milner, 2003) Critical reflection prompts (Gorski & Dalton, 2019)	Printed volunteer submissions of digital (Penzu) journal collected Fall/Winter 2020	Directed content analysis (Hsieh & Shannon, 2005)
RQ 2: How do Pre-K-5 staffs' reported levels of cultural competency change after engaging in critical reflection and equity professional development?	Cultural competency	Self-Identity Inventory (Sevig, Highlen, & Adams, 2000) Race reflective journals (Milner, 2003)	Qualtrics Summer/Fall 2020 (pre-test) and Fall/Winter 2020-21 (post-test)	Descriptive statistics and paired t-tests In Vivo Coding

**Survey.** The SII (see Appendix F) pre-test was completed electronically by volunteer participants through Qualtrics with the survey link distributed via Zoom (n.d.) chat at the beginning of the first grounding day presentation. The post-test survey was provided two weeks after the sixth PD session at a non-PD faculty meeting. The researcher chose to wait two weeks after the final intervention session to ensure that participant survey responses were as accurate as

possible and not directly connected to any emotional response to the PD and/or to limit social desirability bias (Grimm, 2010) towards the researcher.

**Race reflective journals.** Before beginning any intervention sessions, participants were recruited to potentially share their journals and those volunteering to do so submitted their IRB consent forms directly to Dr. JohnBull, the researcher's advisor. Then the full faculty, using their school-issued laptops, created an anonymous electronic journal through Penzu (n.d.) at the first grounding session, Summer 2020. Participants were asked to include their unique identifier at the beginning of each journal entry and to use pseudonyms in reference to any TFES student. After the sixth PD session, Winter 2020, participants who had previously volunteered were invited to provide their journal entries for each session with directions for doing so anonymously to Dr. JohnBull via email.<sup>10</sup>

**Principal's journal.** As the researcher and principal of TFES, I also kept a Penzu (n.d) journal throughout the intervention timespan. Entries captured current events that may interact with participants' interaction, focus, or journal responses. I also transcribed field notes from each session, and my own feelings and interpretations around the provided intervention content. This information was utilized for triangulating findings within qualitative and mixed-method analyses.

### **Pilot Study**

The described intervention, instrumentation, and analyses fall within the scope of a quasi-experimental pilot study where new configurations are implemented as a small study to assess feasibility before being provided or utilized in other contexts and/or with larger sample sizes

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<sup>10</sup> The email with journal submission directions went to all staff as I did not know who completed IRB consent volunteering their journals for this study. In that email it was noted that it was only for those who had volunteered and a reminder that they could still decide to withdraw from the study with no adverse effects to their position.



(van Teijlingen & Hundley, 2013; In, 2017). Instrumentation is also reviewed to determine data gathering efficacy (van Teijlingen & Hundley, 2013). The presented study integrates a range of session content typically presented independently of each other while integrating critical reflection prompts into race reflective journals. This pilot study employed the Gorski and Dalton (2019) critical reflection framework to compare the level of journal prompts to the level of TFES's faculty post-intervention responses. The analyses of TFES faculty's journal prompt responses, qualitatively analyzed using directed content analysis (Hsieh & Shannon, 2005), extend Gorski and Dalton's (2019) typology by considering not only the level of the prompt but also the corresponding level of response. These qualitative data were further analyzed using joint displays (Creswell & Plano Clark, 2011) integrating quantitative data gathered using a newly abbreviated version of the SII (Sevig, Highlen, & Adams).

The quantitative analyses in this pilot study—both independent and integrated into joint displays—have a sample size too small to, typically, adequately achieve statistical significance with the commonly used 5% confidence level (Lee, Whitehead, Jacques, & Julius, 2014). As a result, findings not demonstrating significance at the  $\alpha \leq .05$  level may overlook the efficacy of a pilot study (Lee et al., 2014) such as the combination of identity professional development with critical reflection as measured by the SII to determine increases in one's reported levels of cultural competency. Lee and colleagues (2014) note:

The aim of a pilot study, therefore, is to inform both the decision whether to conduct a confirmatory study and the design of the larger confirmatory trial. Any interpreted P-values in a pilot study should be with a disclaimer that the study is not adequately powered.... Instead, estimation and confidence intervals should be used to infer the size and direction of treatment effect (p. 2).

In response to the Lee and colleagues (2014) additional recommendation that significance levels, “other than the traditional 5% should be considered to provide preliminary evidence of efficacy (p. 7), this study will set the confidence level at 10%. While this increases the likelihood of a type I error, which may lead to a larger study not indicative of positive outcomes (McLeod, 2019), without the slightly higher significance level, this pilot study may demonstrate findings that otherwise would be overlooked (Lee et al., 2014).

### **Data Analyses**

Outcome and process data were analyzed using the following procedures to answer the research questions in chapter five. As indicated in the research design, the outcome evaluation followed an embedded, quasi-experimental, mixed methodology while the process evaluation analyzed identified indicators within each process component of the study.

#### **Outcome Evaluation Data Analysis**

Collected quantitative data was appropriate to answer research question one while research question two was answered through qualitative data analyses. However, as volunteer participants qualitative writing was embedded throughout the intervention process, a final, integrated, analysis combined both findings to better understand the TFES faculty’s cultural competence response to critical reflection throughout the study.

**Quantitative analyses.** Quantitative SII (Sevig, Highlen, & Adams, 2000) survey data were imported to SPSS, combined by anonymous identifiers, and cleaned. Cronbach’s Alpha was run to determine the internal consistency and reliability of the survey items, grouped into composite variables, completed by participants (see Appendix J). The Dissonance subscale had the lowest coefficient alpha (.58 or poor) and preliminary analyses indicated inconsistencies between participant responses. Due to the low sample size, factor analyses were not indicated to

determine reliable relationships between the Dissonance items. Further analyses of items within the Dissonance construct led to item five being removed from the findings presented in chapter five (see Appendix K).

Assumptions testing determined the use of the paired samples t-test, Wilcoxon Signed Ranks Test, or the paired samples sign test for each SII stage pre- and post-survey variable (Field, 2013; Wagner, 2017; see Appendix L). After the examination of the *all participants* paired data ( $n = 45$ ), the researcher sought to determine any difference between those who volunteered to share their journals ( $n = 22$ ) and those that did not ( $n = 23$ ). Finally, effect size was calculated for each construct, within each type of analysis (Cohen's  $d$  for parametric and  $r$ , or rank-biserial correlation coefficient, for non-parametric) to add practical significance to the discussion of TFES's reported level of cultural competency in response to the intervention as measured by the SII. Full assumptions of normality findings are noted in Appendix L and summarized prior to the presentation of statistical analyses.

***Paired samples t-test.*** When a group of individuals, such as the TFES faculty, are assessed under two conditions, such as before and after an intervention with the same SII survey, a paired samples t-test can be run to determine mean differences across all participants (Salkind, 2017). Using SPSS, all pairs are compared between each other and the greater sample to accept or reject the null hypothesis that there is no significant difference between the observed samples (Wagner, 2017). The resulting test statistic ( $t$ ) represents the actual data compared to results expected to confirm the null hypothesis and provides the information necessary to determine the p-value indicating if the results are or are not statistically significant (Salkind, 2017).

***Wilcoxon signed rank test.*** When two measures of the same dependent data violate normality assumptions, the Wilcoxon-Signed Rank Test is the nonparametric alternative to the

paired samples t-test (Field, 2013). Responses to the two measures are pooled to determine the number of differences that are positive, negative, or equal and then ranked based on the magnitude of the differences (Field, 2013; LaMorte, 2017). Tied differences are assigned the mean rank within the pooled scores. Signs (+ or -) are then assigned to the ranks based on the difference scores. The resulting test statistic (W) is the smaller of the sum of positive and negative ranks. This information is processed within SPSS to determine if the observed test statistic supports or rejects the null hypothesis resulting in a z-statistic and if the differences between the same measure given at different points in time are statistically significant (LaMorte, 2017).

**Effect size.** A search of the literature returned studies that utilized the SII as a measure of identity, cultural competence, or multicultural competence to determine the percent of variance in another construct such as teacher efficacy (JohnBull, 2012) or multicultural counseling competencies (Munley, Lidderdale, Thiagarajan, & Null, 2004). However, the SII was not found as a measurement in any intervention studies. In order to determine a probable effect size for a priori determination of the study sample size, the researcher reviewed intervention studies using other instrumentation. Lai and colleagues (2016) completed a meta-analysis of implicit bias interventions using the implicit association test as a measurement tool. The average Cohen *d* effect size of the nine interventions was .32 (Lai et al., 2016). This would be between a small and medium effect size according to Cohen (1988) who noted small, medium, and large as 0.2, 0.5, and 0.8, respectively. While the chosen measurement focused on implicit bias and not cultural competency, reviews of the literature have indicated the underlying influence of implicit bias on an individual's stage of cultural competence (Jacoby-Senghor et al., 2016; Ladson-billings, 2000; Mayfield & Garrison-Wade, 2015).

Using G Power, a statistical power analysis program (Faul, Erdfelder, Lang, & Buchner, 2007), the .32 effect size was loaded with the a priori parameters of a two-tailed t-test<sup>11</sup> and conventional alpha probability and power levels of .05 and .8, respectively (Rossi, Lipsey, & Freeman, 2019). At these levels, the a priori sample size was 79 respondents. Effect sizes of the final, paired sample sizes of 45, 23, and 22 (all pairs, no journal pairs, and journal pairs, respectively) for each construct were calculated using conventional formulas for the paired t-test:  $d = \frac{mean}{SD}$ . Using the G\*power sensitivity power analysis, this study would not be able to reliably detect effects smaller than Cohen's  $d = .42$ , or smaller than  $d = .64$  and  $d = .62$  for the no journal and journal disaggregated samples of 23 and 22, respectively, with a power level of .8 thus increasing the likelihood of a Type II error (Bartlett, 2019). A Type II error falsely identifies non-significant findings and is mitigated by a larger sample size (McLeod, 2019). If the alpha probability is set at .10, however, an all pairs Cohen's  $d = .32$  is possible with a sample size of 45; Cohen's  $d = .46$  and  $d = .47$  can be reliably detected with no journal pairs and journal pairs samples of 23 and 22, respectively. This, however, increases the probability of a type I error, where findings are presented as significant when they are actually by chance (McLeod, 2019).

Determining effect size for non-parametric tests, such as the Wilcoxon and sign tests, uses a different equation:  $r = \frac{Z}{\sqrt{(N\ pairs)}}$  where  $r$  refers to rank-biserial correlation coefficient (Tomczak & Tomczak, 2014). The numerator  $z$  refers to the non-parametric Z-score test statistic and  $N\ pairs$  refers to the number of paired participant observations (Tomczak & Tomczak, 2014). Table 4.4 provides the small, medium, and large range differences between parametric and non-parametric effect size (Cohen, 1988; Patil, 2020).

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<sup>11</sup> Data thought to have a symmetrical distribution should be tested using two-tailed tests to determine data relationships in both directions (positive and negative). For example, the pre-post survey data in this pilot study is being assessed to determine if the intervention had a positive or negative effect on study participants.

Table 4.4

*Parametric and Non-Parametric Effect Size Reference Table*

Effect size	Small	Medium	Large
Cohen's <i>d</i>	0.20	0.50	0.80
<i>R</i>	0.10 – < 0.30	0.30 – < 0.50	≥ 0.50

**Qualitative analyses.** Qualitative data were analyzed using a combination of affective and In Vivo coding (Miles, Huberman, & Saldana, 2014) for research question two and directed content analysis (Hsieh & Shannon, 2005) for research question one with additional affective coding used within the directed content analysis process to determine final codes supporting the a priori themes. Directed content analysis is used with existing frameworks (Hsieh & Shannon, 2005), in this case transformational learning through critical reflection using Gorski and Dalton's (2019) typology of reflective approaches. The typology presented in chapter three (see Table 3.2) describes five critical reflection levels with descriptors this researcher used to develop the journal prompts. These approach-levels were further operationalized to analyze the participants' responses as a priori themes. Hsieh and Shannon (2005) note that coding can begin immediately with these predetermined codes and resulting evidence, or lack thereof, will support or discount participant responses within the presented framework and thus provides evidence to answer this study's second research question.

**Triangulation.** Principal journal entries and intervention session field notes were analyzed to confirm emergent codes within participant journals, as individual entries and as a collective. This was especially important to correlate affective coding processes with events occurring at the time of the participants' journal writing.

**Credibility.** The researcher reviewed participants' provided journal entries multiple times during the coding process to ensure as little subjectivity as possible. A multi-layered matrix was

developed to capture the coding process (see Appendix M; Miles, Huberman, & Saldana, 2014). With each round of coding the researcher reflected on Gorski and Dalton's (2019) typology and if her interpretation of the participants' level of reflection was true to the journal entry or a reflection of the researcher's bias towards the content. This reflective exercise provided important insights for the researcher and how each selected quote actually related to answering the research questions or to her own equity and identity journey. Additionally, the researcher consistently checked her bias and perceptions by cross checking her analyses with Gorski and Dalton's (2019) typology, her advisor, and with doctoral peer reviewers from Johns Hopkins. Creswell and Miller (2000) noted that peer debriefing provides support to the researcher, including asking questions and ensuring interpretations align to the study methodology. Through these actions and reflection, the researcher was able to avoid incorporating, to the extent possible, her biases into the final analysis.

**Mixed method analyses.** The combined quantitative and qualitative data were integrated utilizing joint displays (Creswell & Plano Clark, 2011) to support the answer to research question two. A joint display is a table where quantitative and qualitative results are integrated to compare and analyze study results (Creswell & Plano-Clark, 2011). Additionally, the specific data of three identified participants who volunteered their journals were individually integrated based on their quantitatively-derived SII pre- and post-intervention SII stage result changes (or lack thereof). These analyses supported the triangulation, and later discussion of, findings as complementary, contradictory, or some other result based on mixed-method analyses of survey data with their qualitative journal entries.

## **Process Evaluation Data Analyses**

The following components (dosage, responsiveness of the participant, and project implementation) are discussed with their associated indicators. These measures were used to ensure effective execution of intervention procedures throughout the study.

**Dosage.** One of Dunesbury et al's, (2003) five fidelity of implementation measures, dose is defined as the amount of an intervention provided to a participant. The authors additionally noted that more than one influence should be used to measure the dosage of the received intervention by the participant (Dunesbury et al., 2003). This recommendation in mind, the overall number of Zoom (n.d) attendees for each session was used to determine the average number of intervention sessions attended by participants. Additionally, the length of each intervention session and the average amount of time participants spent journaling at the end of each session was documented.

**Responsiveness of the participant.** The participant responsiveness fidelity indicator refers to the extent participants are engaged in treatment, or intervention, content (Dunesbury et al., 2003). In order to assess this during and after the intervention, the researcher observed and note the average amount of time the first and last finishers spend on their journal writing, a time the researcher is not facilitating PD. Analysis of these observations provided indications of engagement within and across the intervention sessions. These observations may also provide an indication if first or last finishers are consistent same across all PD sessions or if the average time faculty use to complete a critical reflection prompt changes over time. Additionally, the researcher documented (via field notes and her principal journal) the number of participants who volunteered to share (verbally and using the Zoom (n.d.) chat feature) within and across intervention sessions.



**Project implementation.** Stufflebeam (2003) argued for ongoing observation and evaluation of study activities so that the actual process of implementation can be recorded and used for later outcome evaluation measures. For this intervention study, each sessions' PD plans, related materials, and field notes were collected and followed up in the researcher's post-session Penzu (n.d.) reflections to provide insight into this study's project implementation fidelity.

### **Conclusion**

This chapter described the research design for a critical reflection intervention study provided to TFES faculty during the 2020-2021 academic year. Process evaluation methods were supported by the comprehensive description of the intervention delivery and data collection procedures. Outcome evaluation processes, aligned to the research design, started through an overview of this study's data analyses to continue in Chapter 5 with a discussion of the research findings and implications for practice.

## **Chapter 5**

The purpose of this dissertation is to examine the impact of a pilot intervention, combining equity-focused professional learning sessions with critical reflection using race-reflective journaling, on elementary staff's changes in critical reflection depth and subsequent levels of cultural competency. This chapter presents the findings from TFES faculty-volunteered data analyses in the following order: (a) qualitative findings specific to research question one, (b) quantitative, qualitative, and mixed-method findings specific to research question two and, (c) findings informing each process research question (PQ) evaluating the effectiveness of the study. This chapter ends with a discussion of the findings as a whole and resultant implications for future research and practice. As presented in chapter four, the following outcome evaluation research questions framed the current intervention study:

RQ 1. In what ways do Pre-K-5 staffs' critical reflection approach levels change over time when responding to a race-reflective journaling prompt immediately following equity professional development sessions?

RQ 2. How do Pre-K-5 staffs' reported levels of cultural competency change after engaging in critical reflection and equity professional development?

Additionally, these questions were used to evaluate processes within the study:

PQ 1. To what extent did the participants engage in the intervention according to the intervention plan?

PQ 2. How did the designed intervention activities meet the intended outcomes?

### **Findings**

This section begins by presenting qualitative findings specific to specific to research question one using directed content analyses (Hsieh & Shannon, 2005) centered on Gorski and

Dalton's (2019) critical reflection typology. Quantitative findings specific to research question two are then presented. Based on the study's embedded, mixed-method, design, research question two was further analyzed using a sample of respondents' journals qualitatively analyzed using Myers and colleagues (1991) optimal theory of applied identity development and integrated with their quantitative results into joint displays. Finally, process evaluation question findings are presented as an assessment of the efficacy of the provided pilot intervention study activities.

**RQ 1. In what ways do Pre-K-5 staffs' critical reflection approach levels change over time when responding to a race-reflective journaling prompt immediately following equity professional development sessions?**

Anonymous journal entries for the two grounding days and six intervention sessions were voluntarily provided by staff (N= 26). Journal prompts for the grounding days were intended to introduce TFES faculty to a common vocabulary, the use of the Penzu (n.d.) online journaling site, and to the process of journaling at the end of upcoming intervention sessions. As a result, the grounding days' journal entries were not designed to support the staff development of critical reflection skills towards transformational learning (Mezirow, 1998) reflected in this pilot study's conceptual framework<sup>12</sup>. However, these grounding day entries may be used to provide contextual information regarding the faculty's initial feelings towards journaling and writing an identity poem expressed before participating in equity- and identity-focused professional learning sessions.

The following sections reviewed trends associated with participants' operationalized level of response, followed by session-specific findings. These analyses were initially completed

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<sup>12</sup> The two grounding day's journal prompts were (a) What are your initial thoughts around journaling and critical reflection? and (b) What reflections do you have after participating in this session?

with each participant assigned a letter to maintain as much objectivity as possible before replacing letters with randomly-gendered pseudonyms. Analyses by session were captured in a matrix where descriptive codes were noted within the a priori approach-levels (Appendix M). These findings culminate with a summary of TFES's overall changes, or lack thereof, in critical reflection over the course of the intervention.

**Journal prompt-response level trends.** Gorski and Dalton (2019) operationalized their five approaches to critical reflection by analyzing multicultural education and social justice assignments provided to undergraduate students. Social justice was defined by Gorski and Dalton (2019), and used in this study, as the equitable distribution of opportunity and privilege and a social justice advocate supports this work through critical examination of their beliefs and positionality within the construct of oppression to enact societal change. The full typology, as noted in chapters three and four, guided the development of the six intervention session journal prompts. In addition, this pilot study extended Gorski and Dalton's (2019) prompt typology to analyze the level of critically reflective *responses* provided by participants (Table 5.1). To the researcher's knowledge, the typology's approach-levels have not been used as a qualitative lens in other research projects<sup>13</sup>.

Each approach falls within a level of reflection: conservative, liberal, and critical. Gorski and Dalton (2019) describe conservative reflection as considering how to support others with adoption of mainstream values whereas liberal reflection reflects assimilationism and instead focuses on deepening understanding of bias and diversity but without challenging one's underlying belief system. Critical reflection, however, extends the reflective process to one where an individual deeply considers and critiques their beliefs (Gorski & Dalton, 2019;

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<sup>13</sup> Gorski and Dalton's (2019) typology was first published October 24, 2019. Any other research that may be utilizing these critical reflection approach-levels for qualitative analyses could be in development.

Table 5.1

*Combined Typology of Critical Reflection Prompts and Responses*

<b>Critical Reflection Prompt Approach (level)*</b>	<b>Critical Reflection Prompt Definition*</b>	<b>Critical Reflection Response Approach**</b>	<b>Critical Reflection Response Definition**</b>
I. Amorphous “cultural” reflection (Conservative)	To reflect broadly on one’s understandings of “other” cultures, usually in an essentializing way	I. <i>Essentializing Others</i>	Respondents ambiguously focus on culture in a way that stereotypes themselves or others including the use of ‘othering’ language
II. Personal identity reflection (Liberal)	To reflect on one’s personal identities without grappling with the implications of difference or power or how identities influence one’s worldviews or understandings of justice	II. <i>Personal identity experiences without connection to the identities of others</i>	Individuals looking past ‘culture’ to various aspects of ‘identity’ without considering how those identities can be connected or their part in a greater worldview
III. Cultural competence reflection (Liberal)	To reflect on one’s teaching practice with “diverse learners” in light of one’s identities and life experiences	III. <i>Acknowledging other identities in isolation</i>	Cultural competency and diversity ideas are expressed yet do not include reflecting how to advocate for those that are marginalized and oppressed
IV. Equitable and just school reflection (Critical)	To reflect on one’s preparedness and willingness to be an agent of social justice change in a school context	IV. <i>Examining how to effect educational change</i>	Individuals consider their specific positionality and how to explicitly effect social justice in schools
V. Social transformation reflection (Critical)	To reflect on one’s preparedness and willingness to be an agent of social justice change in and out of school contexts and to reflect on the areas of continued growth one needs to be an agent of social justice change	V. <i>Social justice growth and advocacy</i>	Consideration of needed support and the willingness to be an agent of social justice in and out of school; to push oneself to examine their complicity in oppression in school and connect to social justice interests throughout society

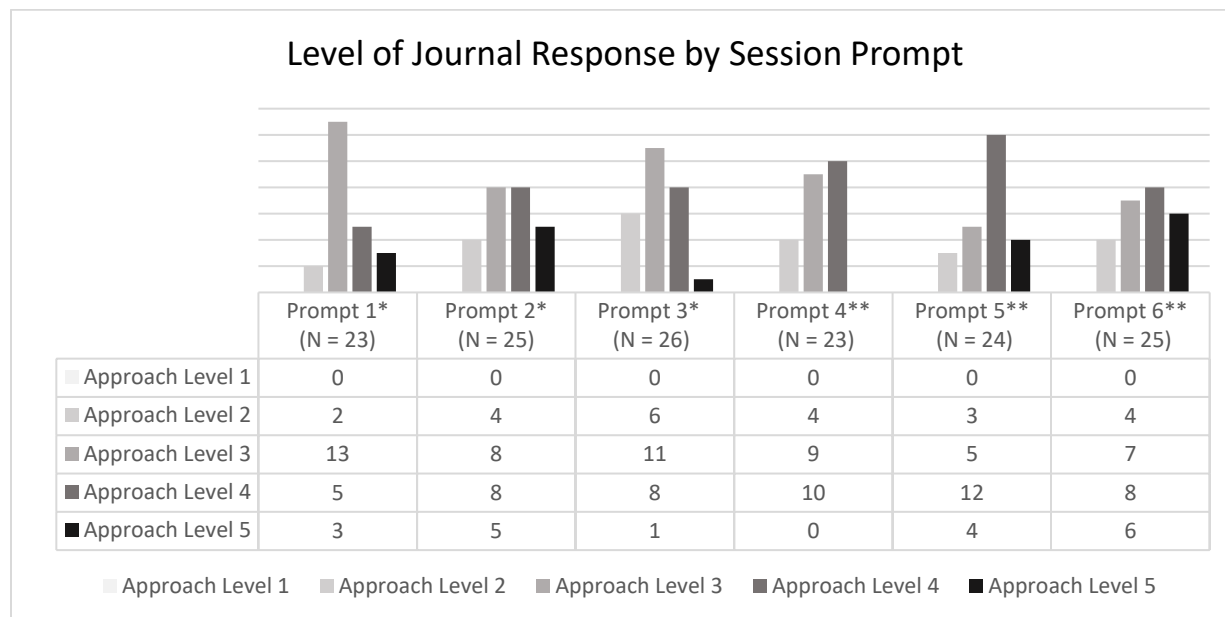
*Note:* \*Adapted from the *Typology of Approaches to Reflection in Multicultural and Social Justice Teacher Education* (Gorski & Dalton, 2019, p. 7). \*\*Response approaches operationalized by the researcher from the original typology.

Mezirow, 1998). In this way, Gorski and Dalton's (2019) typology aligns with the transformational learning aspect of this pilot study's theoretical framework (Mezirow, 1998) and, as intended by the authors, was used to guide the development of explicitly leveled reflection prompts. Without clearly structured reflection activities and prompts, respondents are less likely to contemplate ideas of privilege, oppression, and positionality (Gorski & Dalton, 2019; Liu, 2015). Thus, in this study, the typology-influenced response approaches were used to guide the following directed content analyses (Hsieh & Shannon, 2005). Usage of the typology in this way extends Gorski and Dalton's (2019) approach-levels from an approach-level assessment tool for teacher educators' reflection activities to also determining the degree of TFES participants' critical reflection responses to prompts intended to support their transformational learning.

All journal prompts were designed around two critical reflection approaches: *acknowledging others in isolation* (level 3; prompts 1-3) and *examining how to effect educational change* (level 4; prompts 4-6). The researcher chose these approaches to critical reflection for this intervention pilot study to support faculty's "meaningful reflection opportunities...around multicultural competence" (level 3), and "deep reflection about oppression, especially around forms of injustice" (level 4; Gorski & Dalton, 2019, p. 10). By crafting prompts using approaches three and four, participants are presented with activities that are explicitly aligned to understanding identity and critical reflection. Without this explicit prompting, Gorski and Dalton (2019) note that participants will often adopt a less critical approach.

During the coding process, within a priori themes, the researcher compared the approach-level of participants' responses to the definitions derived from Gorski and Dalton's (2019) typology (see Table 5.1) to determine if, indeed, participants engaged in *critical* reflection. The

subsequent assigned approach-levels to individual journal responses for each session are visually quantitized (see Figure 5.1) followed by further descriptions of each approach-level within the assignment process.



*Figure 5.1.* Approach level of journal response by session prompt. Prompts one through three, indicated by an asterisk (\*) were developed using approach level three with prompts four through six (\*\*) developed at approach level four. The level of critical reflection prompt, provided at the end of each professional development session, was designed to elicit the same response approach level. Session responses were analyzed for indicators identified in the operationalized a priori themes for each approach level and recorded.

***Approach-level 1: Essentializing others.*** As seen in Figure 5.1, the researcher found no journal entries that met the extended definition or described traits stemming from Gorski and Dalton’s (2019) typology. Any journal determined to be aligned with approach two received additional scrutiny upon the researcher’s myriad readings to ensure that the researcher was not incorporating her bias into the level assessment of TFES’s faculty responses<sup>14</sup>. The journal prompts were designed to elicit higher levels of critical reflection, yet that did not deter higher or lower approach responses from participants. Potential reasons for a lack of level one approaches

<sup>14</sup> The researcher did not note the exact number of times each journal was read, analyzed, re-read, and re-analyzed. An approximation would be in the dozens.

include journal participants who may have chosen to volunteer their journals feeling confident about their level of cultural competency. Conversely, those who did not submit may have felt uncertain about their responses and how they'd be viewed (even anonymously). Güntert, Strubel, Kals, and Wehner (2016) note that optional activities aligned to one's values, such as social justice, result in participation due to beliefs in the purpose of the study or volunteer opportunity. Additionally, participants may have consciously or unconsciously engaged in social desirability bias (Grimm, 2010) where the TFES faculty understood the interests of the researcher—their principal focused on equity work—and may have ensured that approach one traits, such as stereotyping, were not included in their journals (Grimm, 2010).

***Approach-level 2: Personal identity experiences without connection to the identities of others.*** While each professional learning session's critical reflection prompt was designed with approach-level three or four phrasing, 16% (23/146; Figure 5.1) of all session journal entries were indicative of an approach-level two response. Classified a lower, *liberal I*, approach by Gorski and Dalton (2019), the authors discuss that approach-level two reflections encourage responders to consider their identities and how experiences shaped their current behaviors. Coding terms used within approach-level two included *privilege* and/or *power*, *lack of focus on oppression*, and *general focus on diversity* which, as a reflection of the a priori theme (Table 5.1), were demonstrated through responses of personal experiences and identities without a greater worldview (Gorski & Dalton, 2019; Appendix M).

***Approach-level 3: Acknowledging others in isolation.*** The prompts for sessions one through three were developed with this *liberal II* approach-level to begin to facilitate participants' critical reflections at a mid-level according to the typology (Gorski & Dalton, 2019) and 36% (53/146; Figure 5.1) of the session journal entries reflected this approach. Based on the



level of prompt, participants should probe concepts at a similar level within their own awareness and understanding of multicultural educational practices. Reflection activities such as those at the end of the first three sessions can “challenge learners to think about what they know” while a *critical* reflection prompt (approach-levels four and five) would extend participants to “consider how they came to know it within the context of structural racism...” (Gorski & Dalton, 2019, p. 3). Coding terms within this a priori theme included *personal struggle with diversity*, *personal responses to diversity* (including *advocacy* and *lack of advocacy*) and *personal identity* (Appendix M). However, the approach-level of the prompt does not preclude the participant from responding at higher or lower levels of reflection (see Figure 5.1).

***Approach-level 4: Examining how to effect educational change.*** The prompts for sessions four through six were developed with language aligned to approach-level four which begins a *critical* level of reflection (Gorski & Dalton, 2019). Of the 146 submitted session journal entries, 35% (51/146; Figure 5.1) included language supporting participants’ “explicit examination of their positionalities and responsibility” related to being an “agent of social justice change in a school context” (Gorski & Dalton, 2019, p. 7). Coding used within this theme included *social justice in school*, *positionality*, *responsibility*, and *risk and preparation* (Appendix M). As seen in Figure 5.1, the highest numbers of approach-level four responses occurred within approach-level four prompts. While there were also examples of other approaches in sessions four through six, the corresponding increase in response-to-prompt approaches does support the “critical intentionality” of providing adult learners with the opportunity for “deep reflection about power and oppression” (Gorski & Dalton, 2019, p. 10).

***Approach-level 5: Social justice growth and advocacy.*** While there was not an intervention session prompt designed to signify the fifth approach and *critical II* level of

reflection, 13% of submitted session journal entries (19/146; Figure 5.1) exhibited this level of content. Gorski and Dalton (2019) noted that this approach-level was not just about social justice advocacy in and out of school, but also about understanding one's readiness to do so and seeking support in areas of needed growth. For example, coding within the a priori theme of *social justice and advocacy* included *personal development towards social justice* and *social justice transformation* (Appendix M). Moreover, responses at approach-level five provided examples that some TFES staff, regardless of the provided prompt's approach-level, deepened their responses in a critically reflective manner.

**Findings by session: a sequential analysis of participant reflections in the Fall of 2020.** This section provides findings of the analyzed approach levels found within and across the provided prompts specific to each equity/identity-focused professional learning session. The researcher sought to determine the overall response of TFES faculty regarding the content of the prompt and the approach-level of response used to communicate that understanding. Additionally, information regarding each session is presented from the researcher's personal principal journal and field notes to add context to and triangulates the participants' journal responses and the general in- and out-of-school environment that couched their replies. Importantly, that context, during the Fall semester of the 2020-2021 school year, included teaching remotely during the Covid-19 pandemic, returning to in-person instruction, several deaths of black men and a woman by police officers<sup>15</sup>, Black Lives Matter protests, and the national election.

***Session 1: Reflections indicative of seeing diversity.*** The first professional development session took place at the end of first quarter with all faculty teaching and supporting students

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<sup>15</sup> Nationally recognized names just before and during this intervention included George Floyd, Breonna Taylor, Rayshard Brooks, and Jacob Blake.

online due to the COVID-19 pandemic. The content focused on the researcher sharing the first time she understood the concept of race and the impact that event had upon her. Staff were then divided into groups of three to four individuals where they could share their experiences if they so choose followed by a return to the whole group (n = 80) where staff could decide if they wanted to share their individual stories or similarities found within their small group. This is a process similar to that used in the second grounding day where participants created identity poems (“I am” poems; citation) and voluntarily shared with two different small groups before rejoining the large group and having a final opportunity to share. This activity was important to building staff collegiality as it provided a process to support each staff member in beginning to consider the intersectionality of their identity (Crenshaw, 1991) which would, ultimately, support their understanding of others.

The transition from grounding to professional development sessions occurred on a non-student workday immediately preceding a school-wide break. The researcher noted in her journal that staff seemed very positive about the PD and excited for their upcoming vacation. The following prompt was provided to all participants to respond to in their online journals: *Reflect on how your life experiences, beliefs, perceptions, and education have led to your current ideas about working with diverse student populations.* This prompt was a natural extension of the PD activity and reflected a *liberal II*, level three, approach. As indicated in Figure 5.1, most staff who volunteered to share their anonymized journals responded with an approach-level three entry or higher. Furthermore, Gorski and Dalton (2019) indicate that this type of question can begin the process of self-reflection leading to individuals engaging in critical reflection of their ability and responsibility to be a change agent related to oppression in schools.

From the prompt, descriptive codes emerged related to the overarching idea of *seeing diversity* referring to looking beyond ideas of treating everyone the same towards a recognition that individuals have varied lived experiences and cultural norms based on their identities. These differences between us include the full intersectionality (Crenshaw, 1991) of identities including gender, race/ethnicity, sexuality, religion, and age, to name a few. Within the approach-level three theme of *acknowledging others in isolation*, where individuals recognize differences as unique instances without considering the impact of oppression (Gorski & Dalton, 2019), seeing diversity included personal responses to various students and examples of participants' own identity-related experiences. Ideas of seeing diversity were also found in the approach-level four theme of *examining how to affect educational change*, but at a *critical I* level with reference to the respondent's responsibility to ensure equitable outcomes for diverse students (Gorski & Dalton, 2019). Combining the large amount of information provided by TFES faculty in their session reflections into a smaller number of content categories, such as *seeing diversity* in session one, is part of Hsieh and Shannon's (2005) directed content analysis process. This category is justified by a combination of analyses and textual evidence (Hsieh & Shannon, 2005).

Responding to the session one prompt at a corresponding approach-level three, Glenda shared the following response that seeing the difference between their childhood and diverse students took time to understand:

It took my brother and I a minute to see how our lives would have turned out differently as adults if we were not White, despite what our childhoods may have been like and that THIS is our privilege... these experiences enabled me to connect with students in similar

[poverty] situations but prevented me from seeing how racism exists in the real world for a long time.

This excerpt illustrates an acknowledgement of others without necessarily discussing actions related to advocacy for students experiencing oppression (Gorski & Dalton, 2019) and highlights an often-used example *color-blindness* (DiAngelo, 2018) where an individual growing up poor and White may feel they share an experiential affinity with individuals of color. Glenda's reflection shows that she once had those feelings ("connect with students in similar [poverty] situations") but have moved passed it to better understand oppression and thus improve her relationships with students ("seeing how racism exists in the real world").

Glenda also revealed her growth in understanding the concept of White privilege and how she used to dismiss it in her family. The capitalization of "THIS is our privilege" is noteworthy as it indicated an understanding that being *White* allowed her family opportunities to rise out of poverty in ways families of color are often not afforded. Moreover, with reference to "despite what our childhoods may have been like," Glenda divulged that she did not always *see* her and her brother's privilege and it "took a minute" to understand its impact. This small excerpt of Glenda's prompt is an example of the initial self-analysis necessary to engage in later critical reflections that could lead to transformational learning (Gorski & Dalton, 2019; Mezirow 1997, 2000).

Another participant, Cathy, also shared a childhood connection that provides an example about how she has, and currently *sees diversity*, and her desire to change the educational narrative (approach-level four):

One thing I do remember is that in elementary school I was often asked to act as a class "tutor" where my teacher would pair me with another student to review a topic we had

just learned in class. It wasn't even explained as a situation where two equal partners were to discuss what we learned. I (the white student) was always the tutor and the other child was my "student." I do distinctly remember that I was often paired with a student of color and I think this has and will continue to heavily weigh in on my current implicit bias...I intend not to be another teacher who puts a student on a certain life "track" in elementary school.

This description provided context for Cathy's understanding of her own implicit bias and subsequent response to it, both in the past and as she moves forward. It is interesting Cathy *did* become an educator and that as she moved through the TFES equity- and identity-focused professional learning there's a recognition of the implicit bias that she has perpetuated yet wants to combat. As noted by Liu (2015), "if reflection stops with reflection itself, it cannot lead to transformative learning" (p. 147). In Cathy's reflection, a decision was made regarding how she will move forward and take responsibility for reducing her own biased practices and improving future student outcomes ("I intend not to be another teacher who puts a student on a certain life 'track' in elementary school").

Within the critical reflection ideas of both seeing the identity of others and one's responsibility in responding to it (Gorski & Dalton, 2019; Liu, 2015), Linus shared the following approach-level four response:

I feel very strongly that working with a diverse student population provides opportunities to advocate for students, while interrupting and breaking down the many barriers that exist. It feels like this constant battle of working in a system filled with barriers and obstacles.... I am definitely a work in progress on this never ending journey.

Linus, similar to Cathy, provided personal steps to move forward, yet is more specific towards his preparedness to enact changes in school for diverse students (advocating, breaking down barriers, etc.). There are a lot of feelings about what is happening in and around education when Linus noted, “It feels like this constant battle of working in a system filled with barriers and obstacles....” His return to the term *barrier* elicits ideas that Linus wants the world to be different and is sad, even angry, that it is not. His response is to be, “...a work in progress on this never ending journey” to support his students and celebrate the diversity therein.

While the full responses to the prompt in session one were as varied as the TFES staff who shared their journals, the common pattern was connecting one’s personal experience of seeing diversity to current practice (Hseih & Shannon, 2005). Those connections ranged in this session from understanding one’s White privilege, to ensuring all students have equitable learning experiences, to taking responsibility for the learning and work necessary to make all of this happen. Seeing diversity, therefore, is not just about seeing the beautiful differences within students (racial or otherwise), but also seeing the need for change within ourselves.

***Session 2: Reflections focused on creating plans of action.*** This session on implicit bias and microaggressions was presented on a workday immediately after TFES faculty returned from their fall vacation and two weeks *before* the first days of in person instruction. Specific activities included watching movie excerpts of microaggressions towards individuals of color followed by small group discussions and ending with positive images that counter the microaggression narrative in pop culture. The researcher’s principal journal indicated that staff were engaged but more introspective than the previous session or grounding days. After the session, however, several staff emailed or texted the researcher to express gratitude for the session as important information for individual and school growth. Tree Frog faculty responded to the following

prompt at the end of the PD session: *What does oppression mean to you? How does implicit bias contribute to that definition? What can you do about it?* While an approach-level three prompt, half of responses were coded within the fourth and fifth approach-levels of critical reflection (see Figure 5.1) and coding within the a priori themes centered around ideas of one's personal response (approach three), positionality and responsibility (approach four), and advocacy (approach five) to create a *plan of action* for learner (faculty and student) equity.

In an approach-level three response, the intent of this session's prompt, participants would focus more on a *personal* plan of action based on experience to support diverse learners (Gorski & Dalton, 2019) but not necessarily as educational change agent. As expressed by Hank in his approach-level three response:

To help eradicate oppression, I think it is crucial to educate yourself. We all know that history taught to us in school is biased, but if people would read on their own or join a book club to hear other people's thoughts on topics, it would be extremely eye-opening for many.

Hank's plan is couched in his *personal experience* of seeing biased educational practices and the enlightenment he found through reading about and talking through equity-focused topics. Hank's acknowledgement of diversity frames the need for others to be supported without indicating personal responsibility to enact the described actions (Gorski & Dalton, 2019). Specifically, Hank noted, "...if people would read on *their own* or... hear *other people's* thoughts..." which puts the onus on others for, "eradicating oppression." As noted by Mezirow (1990), an individual needs to act upon their insights to ensure a transformation in their beliefs, however, the prompt and this response were written at approach-level three and the *plan of*



*action* proposed by Hank (for people to “read on their own or join a book club”) follows that same focus.

Another participant, Elena, provided a strong example of the *plan of action* theme (Hsieh & Shannon, 2015) that she intends to take personal responsibility to enact:

The best thing I can do is monitor myself and others around me for perpetuating and embedded implicit bias. Talk to my daughters about it and have family conversations around topics like "niceness doesn't mean we don't have bias". Admit when I am guilty of such and learn from the person I aggrieved with my implicit bias. Reflect with people outside my circle about breaking the barriers and having critical conversation about how bias impacts the work in school.

This excerpt denotes an approach-level four response in that it indicates one’s willingness to be a social justice change agent in schools (Gorski & Dalton, 2019). Additionally, Elena’s reflection has, to this researcher, palatable emotion with verbiage such as *aggrieved*, *guilty*, and *perpetuating...implicit bias*. Importantly, the emotive aspects of Elena’s journal entry embodies both the nature of critical reflection with its explicit examination of one’s positionality (Gorski & Dalton, 2019), and the affective nature of transformational learning (Maiese, 2017).

Elena’s choice of language emotes the passion she has for equity and identity work as well as the internal conflict and shame felt by past levels of identity development. This researcher is reminded of the ah-ha moment when she realized that not only was White privilege real, but that she had benefitted from it. It is likely that Elena does not just admit guilt when appropriate, but deeply feels guilt when confronted with her biases as the researcher did (and does) when confronted with hers.

Overall, most session two reflection responses were distributed around Gorski and Dalton's (2019) *liberal II* (approach-level three) and *critical* reflection (approach-level four). TFES faculty communicated acknowledgement of their biases and the desire to find ways forward. Randall extended this into an approach-level five journal entry by speaking specifically about advocacy for *all people*:

Once I am aware of my own biases, then I can seek experiences and people that can counteract my implicit bias. This is a time of relearning and reteaching. Finally, I can become an advocate for people who are being oppressed and openly work towards equity for all people.

This self-reflection indicates a general focus of Randall to enact change and engage in the professional learning needed to do so. As noted by Šarić and Šteh (2017), those potential solutions are the central purpose of critical reflection that leads us towards educational transformation. Considering the intervention session topic of microaggressions, Randall's focus on *seeking experiences*, and *relearning and reteaching* may be indicative of his response to the video clips depicting microaggressions towards individuals of color shared with the TFES faculty (Appendix M). The intent to advocate begins for Randall with his *plan of action* to reduce bias and increase equity openly for all. Randall's addition of the qualifier *openly*, may be an important change for him; perhaps part of his plan included moving from responsive to proactive advocacy indicative of "forward-leaning reflection" found within approach-level five (Gorski & Dalton, 2019, p. 7).

***Session 3: Reflections describing pride, perseverance, and privilege.*** The TFES faculty engaged in session three just days after half the staff returned to in person instruction on a non-student workday. The remainder of the faculty were still engaged in virtual instruction. This

session focused on a study of the implicit biases of teachers towards pre-kindergarten students and included evidence that the race of the teacher (Black or White) did not alleviate the expectation that young Black boys would misbehave more than other children (Gilliam et al., 2016). The topic elicited several staff members (10 of 80) volunteering to share with the whole group after returning from small group breakout sessions. The session ended with faculty being provided the following journal prompt: *How do you identify racially or ethnically? Describe what that identification means to you, now, in this environment? Does the description you provided meet your ideal? Why or why not?* These questions represent an approach-level three, or *liberal II*, approach to reflection (Gorski & Dalton, 2019) and specifically highlighted participants' views of their identity and resulted in many, but not all, journal participants noting their race or ethnicity.

Session three codes highlighted experiences around ideas of *pride*, *privilege*, and *perseverance*. Pride (or lack thereof) was discussed in terms of one's cultural or racial identity. Privilege was questioned as personally held or illustrated as that experienced by others. And lastly, perseverance was described regarding those aspects of identity that do not meet one's *ideal* identity. For example, Cathy, who identified as White, provided an illustration of these descriptors in her response:

It is difficult to take pride in the color of my skin because I often feel like it links me to so many things I try not to be. I think in this environment, many white people are being called out on our privilege, ignorance, etc. While I fully acknowledge that I am privileged, have implicit bias, can be ignorant sometimes, I also struggle with being grouped with all white people.

Considering the session topic of implicit bias towards students of color, the critical reflection response seen here indicates the internal conflict between pride in one's identity and the understanding of how privilege may taint the desire to affiliate with those like yourself who do not see "ignorance" or other negative aspects of White history. Cathy showed this with her, "struggle being grouped with all White people." When discussing "this environment," Cathy may have been discussing TFES, or the context of equity work focused on implicit bias. In either scenario, there is the acknowledgement that White individuals are being held up as examples of their race, even when those examples are not the ideal held by the Participant. This is interesting as many Black individuals have been asked to represent their race or held up to negative examples seen in the media (DiAngelo, 2018). The focus on White identity was internalized by Cathy towards herself and, without considering advocacy, represented a response at the same approach-level three as the prompt.

Another approach-level three journal response examining ideas of pride, privilege, and/or perseverance was identified from the perspective of Joanna, who identified as Black:

I identify as Black. In society, I feel fear and pride in being Black. When I became an adult and went to college, I began to have more pride in being Black but also more fearful because I realized how much the world hates us. I love being Black because we are just amazing! We are intelligent, talented, loving, kind, and so strong! But I also realize that we are human, and we have our moments of "weakness". My description is not ideal because I don't want to be fearful of what may happen to me or my loved ones. I don't want people to hate my race.

Joanna provided a palatable, prideful, joy in her Black identity tempered with perseverance around the daily fear and difficulty associated with her lived experience. Potentially connecting

this reflection prompt to the intervention session content discussing bias of both White and Black preschool teachers towards preschool-aged Black boys, Joanna added in “But I also realize that we are human, and we have our moments of ‘weakness.’” The rest of Joanna’s journal entry is clearly connected to internalized feelings of pride towards her racial identity, and the fear of being hated, so this one sentence feels like an add-on acknowledgement towards the expectations of others. That, as a Black individual communicating with others who may not be Black, Joanna felt it was important give a qualifier towards the pride she feels before someone else (presumably White) points out an imperfection.

To expand on Joanna’s anomalous sentence, only one word of this journal entry is in quotes (“weakness”). Using quotes around one word can indicate emphasis of the meaning or may imply a writer means the opposite of the word’s meaning (Grammarly, n.d.). This in mind, “weakness” provided another indication that Joanna may have felt the need to send a signal of deference to the biased ideas held by others, even though she does not see being Black as being weak. What is unknown to the researcher is if the “moments of *weakness*” counter-narrative to Joanna’s authentic feelings of pride and fear is an unconscious result of years of oppression or a conscious decision, based on years of oppression and knowing White people, including her principal, would be reading her journal.

Both Cathy and Joanna, while focusing on their own lived experience, expressed their hopes and fears within ideas of pride, privilege, and perseverance and, in doing so, become a fascinating mirror of each other. Cathy reflects privilege while Joanna illuminates the perseverance held by their respective racial identities; both wish that they could more easily cross over and experience some of what the other holds. For example, it is Joanna and not Cathy who exudes pride in her racial identity yet Joanna fears for her family based on their race.

Cathy's White identity does not have the oppressive background to ever know what that fear feels like and, as her understanding of power and privilege grows, Cathy expressed a level of shame within her racial identity. Both Cathy and Joanna's journals noted that these internalized life experiences (approach-level three; Gorski & Dalton, 2019) do not meet their ideal.

Howard (2003) contends that for teachers to be effective, they need to reflect on their own beliefs about their racial identity and how they impact the identities of their students. To this end, others extended their personal exploration of the provided question with approach level five critical reflection responses. For example, Kennedy, who identified as Black, wrote, "I continue to work toward a common good for all...understanding and acknowledging my own implicit biases, while moving forward to disrupt racism, hate and social injustices from the schoolhouse to the systems that sometimes bind us. This is hard work and never ending." This response was indicative of approach-level five by the reference of systemic racism and the need to persevere in the work necessary to disrupt it (Gorski & Dalton, 2019). Moreover, Kennedy is sharing a resolve in understanding themselves, as a person of color who has her own biases, while also taking part in the solution. Considering the intervention session content of implicit biases towards young children, Kennedy could have ended with the "schoolhouse" but intentionally included "the systems that sometimes bind us" as an extension of the reflection prompt. This expansion illustrates a reflection beyond a simple connection to the teachers within the pre-kindergarten study and towards the larger ramifications of implicit bias (low expectations, higher behavior referrals, etc.; Jacoby-Senghor et al., 2016; Ladson-billings, 2000; Mayfield & Garrison-Wade, 2015) that impacts and extends academic disparities between racial subgroups to inequities throughout society.

While some participants responded directly to the prompt and session content, others connected what their identity means to them in regard to the state of the nation in their responses. Session three was a few weeks before the United States 2020 national election and after many months of racially-targeted tragedies including the killing of several unarmed Black individuals by police officers<sup>16</sup>. Therefore, the timing of this session is important to understand the lived experience of TFES faculty outside of this intervention pilot study. For example, the following approach-level five excerpt from Ophelia:

This [referring to being Black and scared in America] is NOT my ideal, not even close. In fact, my outlook now on our future in regards to race relations is bleak, especially in regards to the election outcome. It is important to note that this is not about Republican or Democrat, but about the potential ideals and growth we make as a country to ensure that everyone, all groups, feel included and valued. I should not live in fear every day for my Black husband and son in 2020 in the United States of America.

This journal segment shows the importance of the noted events throughout the year 2020 that impacted the feelings and needs of individuals as they embarked on equity and identity professional learning. For Ophelia, how she identified racially or ethnically (per the prompt) on this day, was directly connected to these multiple examples of racial bias. These events can elicit strong emotional reactions that impact reflection activities (Maiese, 2017; Shim, 2017) and it is unknown if the same prompt one or even five years ago would have received the same response. Not only is Ophelia fearful, but her chosen words feel angry, even livid. Maiese (2017) contends that critical reflection that includes emotional responses can support transformational learning by opening new ways of interpreting information. While Ophelia was clearly not pleased with how

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<sup>16</sup> Events included the deaths of George Floyd and Brionna Taylor, in addition to others, and the connected protests across the country that ensued as a result.

her racial identity is viewed in the United States in 2020, she also noted willingness to be an agent of change in and out of school contexts (Gorski & Dalton, 2019). By including themselves in the solution (“growth *we* make...”), Ophelia, who identified herself as Black, was reflecting critically in the work of social justice and including what she needs (not to live in fear) to move forward (approach-level five; Gorski & Dalton, 2019).

In this session, the researcher’s principal journal and field notes indicated that the participants sharing in whole group connected the PD topic of teacher bias towards young children to the bias that may exist between adults. This researcher noted a staff member sharing, “Biases are ‘deeply planted’ in us and if all you see are White people in power, or only see BIPOC committing crime, that is what you’ll look for...” The participant then jumped in to reiterate that, “...bias is with all races - we need to connect to the implicit bias and empathy of adults of all races.” This field note reflects the climate of the session the month before the election and just months after several racially-targeted tragedies and events occurred. Thus, the level of critical reflection provided by participants was influenced by those events as well as our affective states which impact our beliefs and responses within the transformational learning process (Maiese, 2017).

***Session 4: Reflection of personal positionality and responsibility.*** This session occurred immediately before the national election on a non-student workday. The subject matter centered on tracking students academically and included an empirical study (Watanabe, 2012) annotated by the researcher. Even with scaffolding, the study’s content was very dense, so the researcher asked TFES faculty sign up for one of two smaller group sessions. These groups received information from the researcher before moving into three person breakout rooms to answer guiding questions. Each small group then shared with the whole upon their return. The



researcher's journal indicates that participants were frustrated that academic tracking persists and that so many knew so little about a process that impacts fifth grade students through high school.

Participants ended the session with time to respond to the prompt: *How do I, as an educator, come to understand the educational experiences of others? How do I ensure all students feel a sense of worth and meet their potential?* This prompt capitalizes on the ideas of *others* and *all* to reflect approach-level four on Gorski and Dalton's (2019) critical reflection typology. These terms coordinate with the a priori theme of how to effect educational change through the examination of one's positionality to effect social justice in schools.

Some participants responded at lower critical reflection levels than the designed approach-level four prompt. Approach-level two responses were few (4 of 25) and focused on general educational practices. For example, in Nolan's session four reflections, he discussed understanding the educational experiences of students by focusing on *educational* history ("as an educator, I try to collect data from an array of sources. I look at each student individually and holistically to analyze their educational history"). While this sounds appropriate to positionality ("as an educator"), the respondent did not communicate the diverse identity of the *learner*, which would have aligned with approach-level three, or how that "educational history" could be used to support change as indicated within an approach-level four response. What Nolan did do is describe how he works to understand the available academic information to make positive educational decisions for students.

The majority of participants (11 of 25) responded to this first critical level of reflection, or approach-level four, prompt with an approach-level three response. These participants answered the question with a focus on how they can meet the needs of students by honoring their individuality as learners (Gorski & Dalton, 2019). For example, Francesca noted:

I help them [students] by meeting them where they are, by accepting them where they are, and letting them know they have the ability to move forward and showing them how in small deliberate steps and with a great deal of laughter and respect and patience.

Francesca clearly responded to the prompt and by noting that students, “have the ability to move forward...,” indicated her focus on the diversity of individual learner needs. One of the core values at TFES reads, “relationships before content,” and includes understanding students’ cultural norms and interests; Francesca may also have been connecting *laughter, respect, and patience* as the educator skills necessary to support individualized, culturally competent, student progress.

The coding used within approach-level four responses extended from learner diversity to include *social justice in school* and *reflective positionality*. As indicated by Vivienne:

We need to have real discussions, real questions, and real data! We need to be open and honest with one another. We need to step outside our normal comfort level! Knowing our students as a person with skills and talents, and not a test score or number.

Vivienne’s use of exclamation marks may indicate a heightened determination to make a difference in the lives of students. This emotive punctuation follows repetition of the term real (“...real discussions, real questions, and real data!”) and reminds this researcher of discussions about not labeling students based on different types of assessments. Instead of grouping students as “level 2 in math” or “green in literacy,” Vivienne is advocating to have specific discussions regarding what students need to meet instruction goals and how their strengths and interests can help leverage that access. In depth collaborations of this nature require “real data” and that teachers ask “real questions” about their students. This takes time and asks teachers to “step outside our normal comfort level!” as, what a student *needs* may require supports outside of

typical instructional practice. Moreover, what a student needs may not be academic at all (“Knowing our students as a person with skills and talents”). As an approach-level four response, Vivienne communicated a feeling of personal responsibility for her influence in schools, and that it is equally important to support colleagues in examining their biases that impact social justice within the TFES context (Gorski & Dalton, 2019).

Transformational learning takes time and requires continuous engagement in critical reflection of beliefs and assumptions to grow and act upon new principles (Mezirow, 1990, 1998). As described by Elena in her approach-level four response:

Share your stories [with students] so common threads and experiences are known and used as reference to a growing relationship. But don't stop the growth or hesitate when things seem to move differently or not according to plan, instead embrace those moments as the best each person has to give and grow from it.

Considering the session content of academic tracking, this researcher infers that Elena is acknowledging the *system* and how to move forward (“don’t stop the growth...when things...[are] not according to plan...embrace those moments...and grow from it”). The growing relationship, for Elena, is necessary to overcome the potential challenges, such as academic tracking, that need to change and that, when others do not grow their understanding of that process, we have to help them find the way. The willingness is there to *act*; to take one’s critical reflection and use it to grow and thus enrich collegial growth and student learning (Liu, 2015).

***Session 5: Reflections focused on preparing to advocate while resigned to reality.*** This session occurred in mid-November, post-election and immediately preceding the Thanksgiving holiday. Coronavirus cases were increasing yet the county had just opened daily, in-person, instruction for those not enrolled in a year-long remote option. Additionally, those enrolled for

the year were going to be given the opportunity to return in January after a mid-December enrollment survey. All of these unknowns meant a lot of staff anxiety about in-person instruction and the uncertainty of teaching assignments post winter break.

Session five was also unique in that, as participants worked through scenarios from Sue et al.'s (2019) micro-intervention strategies, the researcher polled the TFES faculty on their comfort level with the content during the intervention. The data was captured in the researcher's field notes and principal journal. The specific poll asked participants if they felt (a) empowered, (b) supported, (c) uncomfortable, or (d) resigned. The three polls indicated increasing levels of discomfort and resignation as TFES faculty completed the scenarios (see Table 5.2).

Table 5.2

*Poll data taken during session five professional development*

Sue et al. (2019) Microaggression scenarios	Empowered	Supported	Uncomfortable	Resigned
Scenario 1 <i>People with disabilities get special treatment</i>	21%	74%	5%	0%
Scenario 2 <i>Arab Americans are potential terrorists</i>	14%	66%	18%	3%
Scenario 3 <i>Black men are dangerous</i>	17%	53%	24%	7%

*Note:* Full microaggression scenarios and micro-intervention responses found in Appendix H

After the third poll the researcher asked if anyone wanted to share why they chose resigned (which was intended to be defined as apathetic by the researcher but seen by some as another definition: resolute) from the presented choices. The following notes were taken by the researcher:

I asked if anyone wanted to share why they chose *resigned* as I was interested because negative feelings increased with each scenario; two staff members discussed their

feelings. One described they were "resigned" not in giving up, but in making a difference and continuing the work. While noting sadness for the need to still have to do this work, they "see the beautiful colors represented on this (zoom) call and wants to ensure that things improve." The other staff member noted that the scenario was hard, and they chose resigned because, while appreciating the work at our school, we still have to have this conversation.

The presented microaggression scenarios were discussed in small groups along with aligned micro-intervention strategies (Sue et al., 2019). While each poll resulted in the majority of staff feeling "supported," positive responses fell, and negative responses (discomfort and resigned, regardless of the definition used) rose after each scenario. The researcher's field notes after scenario three—regarding a Black man being responded to as a threat for no reason—captured the difficulty of the content.<sup>17</sup> With each scenario, staff were faced with situations closer to their personal realities and thus experiences that they could truly visualize, potentially because they have in the past. The overall increase in participants' discomfort, coupled with comments gathered by the researcher, indicated that the work is important, but staff were "sad" that "we still have to have this conversation." Indeed, the TFES faculty may have been realizing that there was still a lot of implicit bias work in front of them with some situations where advocacy would be difficult. This conflict of desire versus reality emerged in participants' journal responses to the prompt: *Is it important to discuss microaggressions "in the moment?" Why or why not? Describe a time when you took the opportunity to respond, or a time you wish you had?*

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<sup>17</sup> From Sue and colleagues (2019): **Scenario 3:** *An African American male enters an elevator occupied by a White heterosexual couple. The woman appears anxious, moves to the other side of her partner, and clutches her purse tightly. Metacommunication:* Black men are dangerous, potentially criminals, or up to no good.

There were clearly a lot of feelings occurring with staff, based on the session notes and poll data, when they completed their journal responses. Maiese (2017) discussed that transformational learning, as presented by Mezirow (1997), is enriched and influenced by affective critical reflection. With the prompt asking participants to provide a description of a past event, many of the resulting journals intertwined their assessment of current beliefs within the context of previous events. Moreover, the increasing pessimism, as noted by the increased reported feelings of discomfort and resignation in the session polls, were intertwined into participant journals. For example, the following experience was shared by Hank describing a time he wished he had supported another on the receiving end of a microaggression:

When playing a game of sand volleyball 4 against 4, there was a white male that clearly was the jokester of the group. He was constantly trying to make people laugh, but honestly, I never thought he was funny and was already annoyed with him by the time he made this comment. Well, he hit a ball that was close to the line and a player from the other team (young Asian female) called it out. Well, he disagreed and made a joke about why we can't trust a line call from someone with such tiny eyes. I remember immediately being pissed when he said it and noticed the girl. She looked like she wasn't trying to show that it bothered her, but I knew it did. And it constantly bothers me that I did not speak up for her about him being an ass.

Hank also noted that now, "I feel like if you make it clear immediately that you are not comfortable or on the same page as the person, they may feel less inclined to express their rhetoric freely." Thus Hank, in his approach-level four response, discussed being preparing to advocate with the resignation that he cannot change the mind of another while he supports those who are oppressed.

It is notable that Hank did not specifically identify the person's behavior as *racist* and instead used words such as "rhetoric" when describing a race-targeted microaggression. Many have been found to shy away from calling people *racist* as it brings up images of Nazis or the Ku Klux Klan over ideas of oppression and systemic racism (DiAngelo, 2018). Individuals may agree that *racism* exists but will not call out individuals as racist (DiAngelo, 2018); Hank may have been reverting to this lack of labeling in his description of a racial microaggression. Additionally, this reflection comes within the context of the above-referenced memory that includes Hank's examination of his responsibility in that moment, and the past regret that is supporting his current willingness to try (even with the belief that it will not matter). The fact that Hank used expletives (*pissed* and *ass*) to express himself is an indication that the memory was not only unpleasant but still resonates as a lost opportunity, a lost moment to make a positive impact. So, Hank's apathy may not be that his involvement would not have an effect, but that he simply did not intervene.

Other participants shared similar approach-level four ideas of reflecting on and preparing themselves to be a change agent in schools. Michael, for example, stated, "I don't know if I personally am ready to have full discussions every time I witness a microaggression, although I am hoping to get there, but they need to at least be made visible and/or clarified and called out." The hope Michael has is to develop the skills to "call out" microaggressions when identified. This is seen as a first step to, eventually, engaging in those "full discussions" and extend equity work beyond his current comfort zone.

Similarly, Daria noted that she has responded when a microaggression was directed at her, "...but there are more times when I have not...you can challenge these microaggressions when they occur [but] you may not get through to the person at that moment but it will add to the

impetus to challenge [their] thoughts.” This response is indicative of desired change stilted by an acknowledgement of the difficulty inherent in equity work. Moreover, Daria noted that, sometimes, responding to microaggressions may result in the aggressor engaging in their own reflective process to, ultimately, change their behavior. The scenarios from Sue et al. (2019) micro-intervention strategies were real-world and, as the intervention-session collected poll data visualizes (Table 10), created a sense of sadness and/or indifference among some participants as they worked through each. However, while both Michael and Daria shared their reluctance to responding when seeing microaggressions, they also indicated their responsibility to try.

***Session 6: Reflections desiring support, comfort, and safety.*** This session found the highest levels of work-school-pandemic stress in the TFES faculty than in any other. In-between the Thanksgiving holiday and winter break, staff saw Covid-19 spikes, more students in the building than previous sessions, and the knowledge that they cannot know or plan for what will come. The final session of equity- and identity-focused professional development was also difficult for participants as the content focused on children explaining their skin color preference which, for children of color, often included skin tones lighter than their own (CNN, 2012). The researcher’s principal journal noted that, “...discussion centered around how difficult it is seeing students not liking themselves and wanting to be *lighter*, and that colorism is real, even within communities of color.” Colorism refers to a type of discrimination based on skin tone, with lighter tones receiving more favor than individuals with darker skin tones (Bonilla-Silva, 2006). The TFES staff also stressed the importance of text-representation in schools for children of color (authors and characters). The final session discussion prompt asked participants to critically reflect on: *Am I willing to speak about race to support those who might not be present in the conversation? Are there spaces where I would be less likely to express injustices of race?*



The final critical reflection prompt focused on responses and preparedness of participants to be an agent of change, even when those who would be positively affected by that change are not in the room. While the prompt was written at approach-level four, it is only because the text did not explicitly include reflection content of advocacy outside of school contexts that this was not an approach-level five prompt. This may be why there were the greatest number of approach level five responses with this prompt in addition to the most equally distributed variability of approach levels across all prompt (see Figure 5.1).

The wider distribution of response approach-levels by TFES faculty shows an honesty and authenticity in their beliefs about racial injustice including beliefs of comfort, safety, and their ability to provide support or receive it. For example, Bonnie provided this approach level two response, “My experience of these types of difficult conversations [about race] is that they require preparation and holding a clear goal in mind, on my part. I have to be invested in maintaining a relationship in order to do this kind of work.” This journal entry evokes a focus on Bonnie’s personal comfort with existing relationships. It would be interesting to understand if Bonnie has also considered (but did not note) how relationships could be strengthened by having honest conversations about race or identities other than her own. By noting that she has to *be invested*, Bonnie indicated that there are some individuals, likely friends or family with similar values, that she would be more likely to engage in difficult conversations, such as addressing race.

Safety, both personal and emotional, arose in participant journals and within the researcher’s field notes indicating that, depending on the situation, some staff will not engage in race-focused conversations. Zachary stated:

I am not sure. It depends on the environment, the tone of the conversation, who is present, and if I feel safe in speaking. I don't like having to try to convince someone of another perspective, especially if they are not interested in considering another perspective. If the people in the conversation are open...then yes, I am willing to speak about race to support those who might not be present....

Zachary follows the idea of being safe with, “having to try and convince someone of another perspective...,” however, this researcher is not clear if this was about physical or psychological/emotional safety. Regardless of racial identity, when speaking with others about race counter to the dominant narrative, there is the possibility for backlash. This researcher, for example, recently received an email about how I was spreading divisive rhetoric when sharing my condemnation regarding violence against the Asian community. Additionally, the researcher’s husband recently lost a good friend when he tried to explain why White privilege is real. These personal examples of the researcher, when extrapolated to the responses of TFES faculty such as Zachary, brings a new light to words such as *safe*, *convince*, *perspective*, and *open*. It is possible that this individual was considering consequences beyond the immediate act of speaking about race such as being professionally or personally criticized, losing a friend, or otherwise the danger of being ostracized by those not “open” to the conversation.

The idea of safety arose again with Daria who shared, “I think it would be hard for me to express my true feelings without a ‘back-up.’ ...it would be difficult to use my knowledge instead of my emotions to educate someone.” This approach-level three response focuses on the Daria’s beliefs within a diverse discussion but not the importance of *having* the discussion. Moreover, Daria acknowledged that equity and identity work is personal (using knowledge instead of emotions) and that there is safety in numbers for equity work as much as the adage is

used for physical protection. This quote of interacting with others differs from Daria's session four response (which was determined by the researcher to be at an approach-level four) where Daria noted the importance of "working with others to overcome their biases." While the difference is slight (having the conversation versus not), if we postulate that Daria has the level of personal insight to be critically reflective, then the differences between her session four and session six responses becomes a salient example that the depth of reflection is influenced by the prompt. The depth of reflection is also impacted by the level of engagement of the respondent which Liu (2015) stated should be constant in order to be effective at ensuring transformative change. The reduction in critical reflection levels for session six from session four may also be a result of the time of year, recent national events, or the content itself (academic tracking in session four to children's implicit bias in session six). However, as seen with every TFES faculty member whose journals were shared for analysis, Daria's interaction with reflection activities provided an avenue for grappling with both session content and personal beliefs, which led to personal growth.

Liu (2015) also noted that critical reflection towards transformational learning includes continual analyzing and critiquing previously held assumptions followed by implementation of any necessary changes. Sandy captured this in the following approach-level four response:

When we are having these conversations [about race], it might seem like we're talking about specific issues, but what we're really talking about is who we are and our perspective on what the world should be... basically the reflection of our thoughts and how we see the topic...

This assessment by Sandy of her beliefs is a salient example of critical reflection and how, if she is going to speak up, she must examine those beliefs. Noting that she was "really talking about

who we are and our perspective of what the world should be,” the researcher wonders if Sandy is cognizant of potentially negative interactions that may ensue for stating her beliefs. There is an implied idea that debating ideas of race, racism, equity, and inequity may be different than the perspectives of others in the conversation. DiAngelo (2018) noted that when individuals decide to engage in racialized conversations that they also have to consider how articulated ideas will impact their standing within a group. Sandy may have been pondering this effect as well. Ulrich extended that examination to *any* context in his approach level five response:

I hope that I am just as likely to express my beliefs when there is a person of color present. I think it happens less often because people often reserve their prejudice comments and behaviors for when they are with same race people. I am working to eliminate those spaces where it is uncomfortable and continue to express my views in a positive and thoughtful manner without anger.

Like Sandy, this quote reveals that there are spaces where Ulrich is uncomfortable and sees an implied negative effect for speaking up about racial issues (DiAngelo, 2018). This is an approach-level five response in that Ulrich indicates specific needs for development (Gorski & Dalton, 2019) to best advocate (“...eliminate those spaces where it is uncomfortable...”). This is like Ulrich’s session two response (also approach-level five) where he mentioned that he “must be willing to have hard conversations with others”; Ulrich’s consistency across sessions was illustrated with clear reflections on his preparedness to be a change agent in and out of school (Gorski & Dalton, 2019). This consistency, however, did not preclude Ulrich from personal growth as he moved from “must be willing to” to “working to eliminate” in his response to situations regarding race, implicit bias, and oppression. The early session two response of “must be” denotes a change that is imperative but difficult or uncertain. By session six, Ulrich has a

focus and is “working” towards greater confidence in his ability to respond to other’s who may not share the same worldview.

These examples exemplify the variability in participants’ session six responses while challenging their own beliefs based on their current level of cultural competency and depth of critical reflection. Additionally, it shows how some participants change (Daria) and others show consistency (Ulrich) across sessions and over time. Furthermore, by sustaining this professional development over time (Darling-Hammond, Hyler, & Gardner, 2017), more TFES faculty were showing critical levels of reflection by the end of the intervention than they were at the beginning (Figure 5.1).

**Critical reflection changes, if any, in TFES faculty.** The findings by session prompt, developed at approach-levels three and four, elicited a range of responses at approach-levels two through five throughout the intervention sessions. The quantitized data (see Figure 5.1) and findings by approach level seem to indicate an overall increase in critical reflection approach-levels as written by participants in their volunteered journal entries throughout the intervention sessions. While many responses either matched or exceed the approach-level the prompt was written to elicit, others indicated lower levels of reflection *for that prompt/content*. Moreover, descriptions of events and feelings occurring contemporaneously with the provided professional development illustrated the varied influences on TFES faculty responses.

While Gorski and Dalton (2019) stress that the depth of reflection necessary to ensure transformative learning follows prompts designed to probe issues of power and oppression, these activities do not happen in a vacuum. The excerpts included in these findings are examples found throughout the 26 volunteer journal participants and show their commitment to equity work within a host of external factors outside of their control. The TFES faculty collectively bared

their emotions and displayed personal growth within and across the equity- and identity-focused professional learning sessions. The trajectory of an individual's growth is predicated on a variety of factors and a single prompt-response will not tell a participants' full story. What critical reflection prompts and responses do achieve, however, are methods for participants to stretch their thinking and consider alternatives to current belief structures. For the TFES faculty, the cognitive dissonance sparked by professional learning sessions was captured in these critically reflective journals and used to both answer questions and ruminate on bigger ideas about cultural competency as they increased understanding of their identity and the identities of others.

**RQ2: How do Pre-K-5 staffs' reported levels of cultural competency change after engaging in critical reflection and equity professional development?**

This question's quantitative (pre-post surveys) and qualitative (a stratified, purposeful, sample of respondent journals) findings measuring cultural competency are presented for this question followed by a mixed method methodology within a joint display (Creswell & Plano-Clark, 2011). Stratified, purposeful, samples are used to highlight subgroups within the data and encourage comparisons (Marshall & Rossman, 2014; Suri, 2011). The qualitative subgroups, in this study, were journal participants whose quantitative data indicated an increase, no change, or decrease in cultural competency; these data and qualitative journal excerpts were combined within the joint displays to support the answer to this first research question.

**Quantitative findings.** Examination of the quantitative analyses specific to research question one centered on Self-Identity Inventory (SII; Sevig, Highlen, & Adams, 2000) items representative of the first five stages—Individuation, Dissonance, Immersion, Internalization, and Integration—of Myers and colleagues (1991) optimal theory applied to identity development (OTAID) model. These stages represent increasing levels of an individual's cultural competency,

recognizing the intersectionality individuals hold and respond to within their identity development. Moreover, the OTAID stages of development (see Appendix A) describes one's awareness of the positive and negative responses individuals experience and/or express throughout society (JohnBull, 2012; Myers et al., 1991; Sevig, Highlen, & Adams, 2000).

To effectively evaluate participants reported levels of change in their cultural competence, pre- and post-test paired analyses were conducted for each construct. These tests included all participants' pre-post data followed by participants disaggregated by those choosing to, or not to, provide journals for this study.

***All participants.*** Items within the SII were combined into composite variables by OTAID subscales (Individuation, Dissonance, Immersion, Internalization, and Integration) using the transform function in SPSS. This section includes a summary of assumptions of normality testing and findings associated with the pre-post analyses of each SII subscale (Sevig, Highlen, & Adams, 2000).

***Assumptions tests.*** The pre- and post-survey OTAID level composite variables were matched using anonymous codes created by participants and included in each survey. Assumptions testing of the participants' pre-post composite variable differences indicated that Dissonance, Immersion, and Internalization violated normality (see Appendix L). As a result, the pre- and post-Individuation and Integration composite variables underwent parametric paired t-test analyses while the Dissonance and Internalization composite variables were analyzed using the non-parametric Wilcoxon Signed Rank Test (Wilcoxon). The Immersion pre-post difference variable violated the symmetry assumption required for the Wilcoxon and so, was analyzed using the non-parametric Sign test.

*Stage 1: Individuation.* As seen in Table 5.3, the paired samples t-test did not detect a statistically significant change in Individuation ( $t = -.45$ ;  $p = .65$ ). Agreement with items such as “Sometimes I get tired of people complaining about racism” are indicative of this level of identity development focused on stereotypes and dominant culture (Sevig, Highlen, & Adams, 2000, p.182). Additionally, there was no discernable effect size ( $d = .07$ ) within the Individuation stage findings for all participants; Cohen (1988) indicated small, medium, and large effects as .02, .05, and .08, respectively.

Table 5.3

*All Participants' Parametric Test Results*

Self-Identity Inventory Stage	Pre- Survey $M$	$SD$	Post- Survey $M$	$SD$	$t$	Sig. (2-tailed)
Individuation N= 45	2.34	.85	2.29	.92	-.45	.65
Integration N= 45	4.88	.85	5.00	.83	1.41	.16

Note: \*\* $p < .05$ ; \*\*\* $p \leq .01$  confidence level set for this pilot study

*Stage 2: Dissonance.* The non-parametric Wilcoxon Signed Rank Test indicated that matched pair analysis of the Dissonance stage, characterized by a feeling of isolation from mainstream society, was not statistically significant and presented no practical effect ( $Z = -.11$ ,  $p = .91$ ,  $r = .01$ ; Table 5.4). Overall, participants reported similar pre- and post-intervention agreement (4.41 and 4.42) with statements such as “I understand that everyone is expected to follow the same rules even if they don’t seem to be right for everyone” (Sevig, Highlen, & Adams, 2000, p. 181).



Table 5.4

*All Participants' Non-Parametric Test Results*

Self-Identity Inventory Stage	Pre- Survey <i>M</i>	<i>SD</i>	Post- Survey <i>M</i>	<i>SD</i>	<i>Z</i>	Sig. (2-tailed)
Dissonance N= 42	4.41	.69	4.42	.85	-.11	.91
Immersion N= 41	3.17	1.06	2.91	1.11	-2.07	.03**
Internalization N= 43	3.95	.86	4.26	1.05	-2.27	.02**

Note: \*\* $p < .05$ ; \*\*\* $p \leq .10$  confidence level set for this pilot study

*Stage 3: Immersion.* The next stage of the SII, Immersion, is characterized by positive recognition of aspects of one's identity previously unexplored coupled with negative feelings towards society's more dominant identity beliefs. The post-pre mean differences (see Figure 5.2) indicate a reduction in agreement with these views. Indeed, the Wilcoxon Signed Rank Test showed a statistically significant decrease ( $Z = -2.07$ ,  $p < .05$ ,  $r = .23$ ) between Immersion scores reported in the post-survey compared to those provided before the intervention. Reducing agreement with items, such as, "My identity as a member of my group is the most important part of who I am" (Sevig, Highlen, & Adams, 2000, p. 181; see Appendix A), may indicate an expanded move to more inclusive dynamics beyond one's own group. A higher stage of cultural competency than Dissonance, a reduction in the overall TFES Immersion level could be a positive result if the data also reveals an increase in the next two stages, Internalization and Integration.

*Stage 4: Internalization.* Individuals demonstrating the Internalization stage of identity development are beginning to understand the extent of oppression while accepting the intersectionality of their identity and being more accepting of those different than themselves. This acceptance would be indicated by a high level of agreement with statements such as "I recently realized that I don't have to like every person in my group" (Sevig, Highlen, & Adams,

2000, p. 182). Tree Frog faculty participants reported statistically significant levels of post-intervention Internalization ( $Z = -2.27, p < .05, r = .24$ ) which also indicated the highest effect size among each SII stage analyzed with *all* matched pairs of pre-post data. As an individual reduces their affinity with statements aligned to lower levels of multicultural identity development, such as those in the Individuation and Dissonance stages discussed above, the results should reveal higher levels of participant agreement with Internalization and Integration.

*Stage 5: Integration.* The Integration stage, focused on how one welcomes the differences of others as indicated by agreement with statements such as, “People in the U.S.A. have been socialized to be oppressive” (Sevig, Highlen, & Adams, 2000, p. 181), did not indicate statistically significant findings ( $t = 1.41, p = .16$ ) but did note a small effect size ( $d = .20$ ) which may suggest that there was some practical effect for increasing reported beliefs in this OTAID stage after engaging in the pilot intervention activities. Cohen (1988) noted small, medium, and large effect sizes as 0.2, 0.5, and 0.8, respectively.

*Cultural competency change findings across stages 1-5 for all participants.* When interpreting paired data of all applicable TFES participants’ ( $n = 45$ ) across stages of cultural competency measured by the SII, increased levels of cultural competency were reported after the provided pilot intervention. Participant differences in pre- and post-survey means reveal increasing affinity with the items of Internalization and Integration (levels 4 and 5) while Individuation, Dissonance, and Immersion (levels 1, 2, and 3) beliefs were reduced. To move forward along the cultural competence continuum, pre-post data should show an average reduction in the lower stages, or personal level, while increasing within the interpersonal and institutional levels (Sevig, Highlen, and Adams, 2000). Overall, Figure 5.2 provides a clear visual of the reported post-intervention cultural competency increase in TFES faculty with Table

5.4 indicating statistical significance within the Immersion and Internalization stages.

Disaggregating the *All Participants* data into those who volunteered to share their anonymous journals and those who did not may provide additional insights into how reported beliefs are similar or different based on the understanding that part of the intervention, critical reflections, would be read and analyzed.

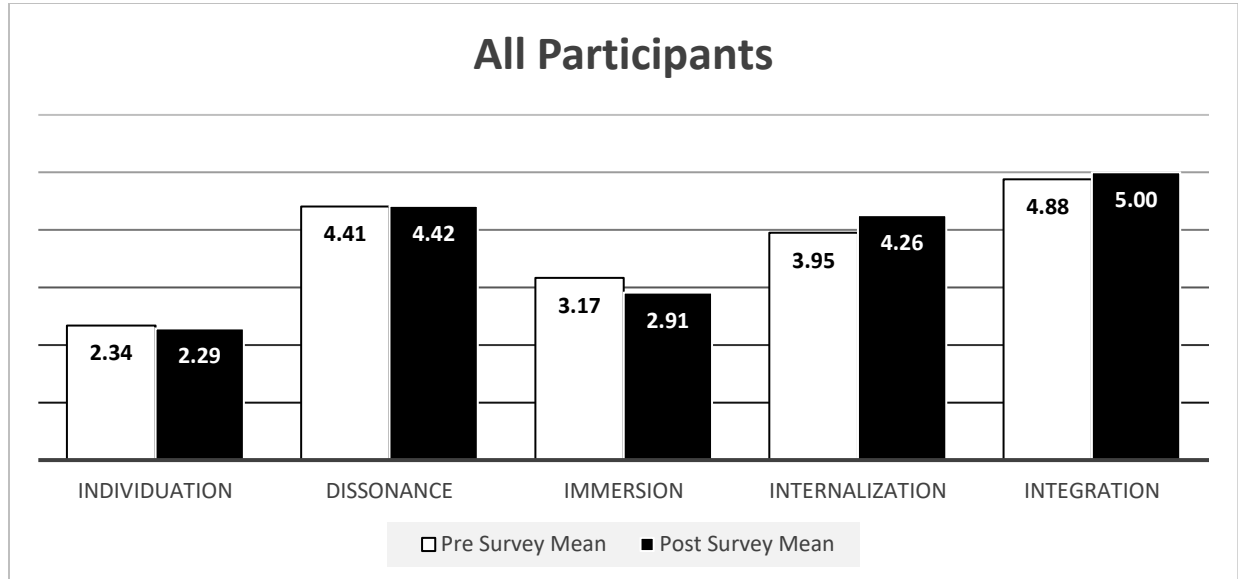


Figure 5.2. All participants pre-post mean score differences by SII stage

***Participants without journal submissions.*** Pre- and post-survey responses for staff who did *not* volunteer to provide journals were pulled from the full participant data set. This section provides a summary of the assumption test results followed by the SII findings for each subscale.

***Assumptions tests.*** Assumptions tests (see Appendix L) indicated that SII Dissonance and Immersion subscale composite variables required the non-parametric Wilcoxon for paired analyses based on violations of required normality. The Individuation, Internalization, and Integration subscales, however, met normality assumptions and were analyzed using the parametric paired samples t-test.

*Stage 1: Individuation.* To determine if TFES faculty who participated in the equity and identity-based intervention had a change in their Individuation stage level of cultural competency, a paired t-test was conducted. As indicated in Table 5.5, there was not a statistically significant change in this personal level of the SII ( $t = -.74, p = .46$ ). Additionally, Cohen's  $d$  was calculated to have less than a small effect size, or practical significance, within the Individuation stage ( $d = .15$ ). While the difference in mean scores were reduced pre- to post-intervention (2.63 to 2.50), indicating participants agreed less with statements more indicative of stereotypical and oppressive beliefs, it was not at a level between and within individuals to show a statistically significant adjustment in the Individuation stage of identity development.

Table 5.5

*Participants without Journals Parametric Test Results*

Self-Identity Inventory Stage	Pre- Survey $M$	$SD$	Post- Survey $M$	$SD$	$t$	Sig. (2-tailed)
Individuation N=23	2.63	.89	2.50	.88	-.74	.46
Internalization N=23	4.07	.79	4.28	1.08	1.25	.22
Integration N=23	5.02	.71	5.04	.67	.14	.88

Note: \*\* $p < .05$ ; \*\*\* $p \leq .10$  confidence level set for this pilot study

*Stage 2: Dissonance.* The Dissonance composite variable for this subgroup of TFES faculty indicated higher agreement with this subscales' items: "I am starting to feel angry about discrimination in this country" and, "I understand that everyone is expected to follow the same rules even if they don't seem to be right for everyone" (Sevig, Highlen, & Adams, 2000, p. 181). Additionally, the Wilcoxon indicated this change was at the statistically significant level set for this pilot study (.10) and showed a small effect size ( $Z = -1.73, p = .08, r = .26$ ; Table 5.6). This subgroup may have felt more knowledgeable of the discrimination and oppression found within the United States after engaging in the intervention activities. Thus, the items noted above, taken

literally, may indicate that the staff represented in these data were not angry or truly understood rule expectations across racial groups before receiving the intervention treatment and the post-survey findings capture their increased Dissonance accurately.

Table 5.6  
*Participants without Journals Non-Parametric Test Results*

Self-Identity Inventory Stage	Pre- Survey <i>M</i>	<i>SD</i>	Post- Survey <i>M</i>	<i>SD</i>	<i>Z</i>	Sig. (2-tailed)
Dissonance N=21	4.42	.50	4.61	.58	-1.73	.08***
Immersion N=20	3.03	.82	2.65	.88	-2.47	.01**

Note: \*\* $p < .05$ ; \*\*\* $p \leq .10$  confidence level set for this pilot study

*Stage 3: Immersion.* Immersion is the third of five stages and part of the OTAID interpersonal level with stage four, Internalization (Myers et al., 1990). The non-parametric Wilcoxon showed statistically significant findings with moderate effect size ( $Z = -2.47, p = .01, r = .39$ ). Similar to the Dissonance construct, and seen in Figure 5.3, participants' pre-post intervention means trended in the opposite direction than anticipated (the 2.65 post-survey mean scores were lower than pre-intervention at 3.03). However, a positive response for the middle of a scale is nebulous and rests on the overall pre-post findings across the continuum.

*Stage 4: Internalization.* Internalization, where oppression begins to be understood more fully, was not found to be statistically significant for the no journal pairs subgroup of the TFES faculty ( $t = 1.25, p = .22$ ). However, there was a small effect size ( $d = .25$ ) indicating some practical effect of the intervention. Internalization also showed the greatest mean score increase (.21) for the participants without journals subgroup indicative of a positive change in staff identity development underlying their cultural competency.

*Stage 5: Integration.* The Integration stage findings of participants without journals showed the least amount of change across all five stages. Not only were the findings not statistically or practically significant ( $t = .14, p = .88, d = .02$ ), both the paired t-test values and mean score change show little movement (.02 mean score change).

*Cultural competency change findings across stages 1-5 for participants without journal submissions.* Pre-post mean score differences for TFES faculty who chose not to share their anonymous journals showed less over change than the findings of all staff with matched pre-post data (see Figure 5.3 with reference to Figure 5.2). Interestingly, the mean difference with Individuation is more pronounced with this subgroup of faculty, and the Dissonance stage increased.

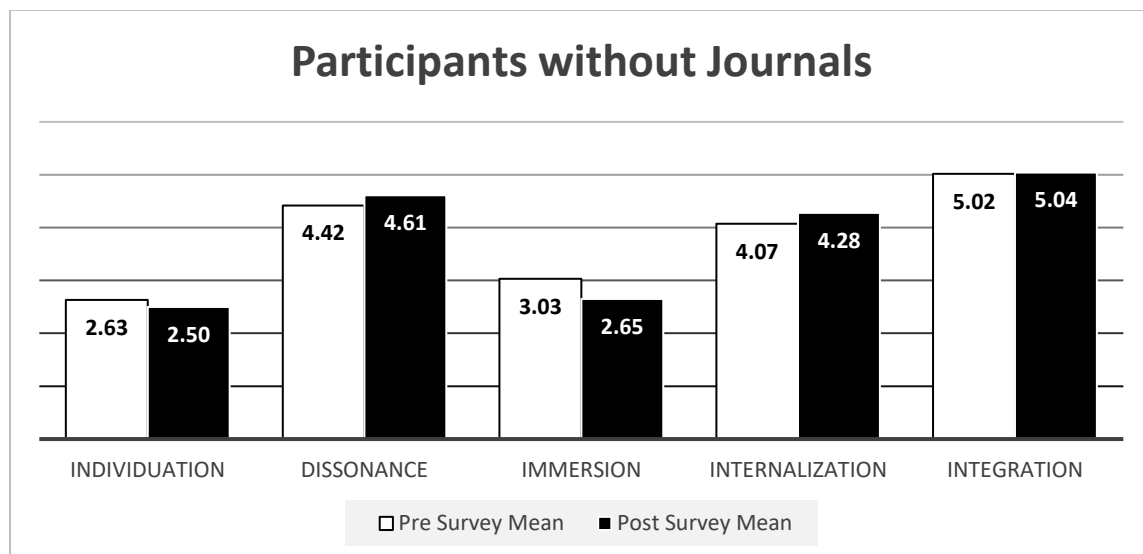


Figure 5.3. Participants without journals pre-post mean score differences by SII stage.

Overall, the *participants without journals* data indicated that changes in this subgroup of the TFES faculty's cultural competency were positive, yet non-linear. Increases in less culturally competent stages, such as Dissonance, are possible while also having improved levels of agreement in higher OTAID stages, such as Internalization. Additionally, some of the most statistically significant change occurred for the no journals subgroup in the Dissonance and

Immersion stages with practical significance in the Immersion and Internalization stages. Whatever the change from pre- to post-survey for these faculty members, their responses provided an indication that identity development is complex and a holistic process. One can both feel disconnected while also moving forward by being more tolerant of others.

***Participants with journal submissions.*** The *journal participants* subgroup (n = 22) represented half of the pre- and post-survey paired responses, specifically those that provided their anonymized journals after the intervention ended. The following section captures the findings of SII analyses by subscale composite variable beginning with assumptions of normality testing.

*Assumptions tests.* Assumptions testing for those respondents with matched pre-post surveys and submitted journals were completed (refer to Appendix L) revealed the SII Dissonance and Internalization subscales violated normality and required nonparametric analysis using the Wilcoxon Signed Rank test. Conversely, Individuation, Immersion, and Integration met normality assumptions and were analyzed using the paired samples t-test.

*Stage 1: Individuation.* This level of identity development presented with the lowest mean scores across all stages both pre- and post-intervention (Table 5.7). The paired t-test

Table 5.7

*Journal Participants Parametric Test Results*

Self-Identity Inventory Stage	Pre- Survey <i>M</i>	<i>SD</i>	Post- Survey <i>M</i>	<i>SD</i>	<i>t</i>	Sig. (2-tailed)
Individuation N=22	2.04	.69	2.07	.93	.21	.83
Immersion N=22	3.36	1.24	3.15	1.23	-1.69	.10***
Integration N=22	4.72	.96	4.95	.99	1.71	.10***

Note: \*\* $p < .05$ ; \*\*\* $p \leq .10$  confidence level set for this pilot study

findings were not statistically significant and showed no effect ( $t = .21, p = .83, d = .04$ ).

*Stage 2: Dissonance.* The Wilcoxon Signed Ranked test findings were not statistically significant and showed a small effect size ( $Z = -1.07, p = .28, r = .16$ ; Table 5.8). Additionally, the journal participants post-intervention means were reported lower than those of the pre-intervention survey. Unlike the participants without journal pairs, and all participants analyses, this group presented an anticipated reduction in their levels of Dissonance. These findings may indicate this subgroup of participants were moving through this stage of cultural competence, as measured by the SII (Sevig, Highlen, & Adams, 2000), during the implementation of intervention activities.

Table 5.8

*Journal Participants Non-Parametric Test Results*

Self-Identity Inventory Stage	Pre- Survey <i>M</i>	<i>SD</i>	Post- Survey <i>M</i>	<i>SD</i>	<i>Z</i>	Sig. (2-tailed)
Dissonance N=21	4.35	.93	4.11	1.20	-1.07	.28
Internalization N=20	3.81	.93	4.23	1.03	-2.00	.04**

Note: \*\* $p < .05$ ; \*\*\* $p \leq .10$  confidence level set for this pilot study

*Stage 3: Immersion.* With the confidence level set at .10 for a pilot study, the paired samples t-test showed statistically significant findings for the Immersion subscale with a small effect size ( $t = -1.69, p = .10, d = .36$ ; Cohen, 1988; Table 5.7). The pre-post mean scores of this subgroup decreased (3.36 to 3.15), indicating waning agreement with items such as “Being with people from my group helps me feel better about myself.” (Sevig, Highlen, & Adams, 2000, p.182; see Appendix A). A mid-point of the OTAID (Myers et al., 1991), the Immersion stage and SII subscale items (Sevig, Highlen, & Adams, 2000) may indicate a move past a singular focus in one’s own identity-based group towards a positive incorporation of multiple identities and groups (Internalization) and embracing all differences therein (Integration).



*Stage 4: Internalization.* Across all analyses, aggregated and disaggregated, the participants providing journal entries Internalization stage paired analyses presented the highest pre-post intervention mean score difference of .42 (see Table 5.8). The resulting Wilcoxon findings were statistically significant using traditional confidence levels of .05 and demonstrated a medium effect size ( $Z = -2.00, p = .04, r = .32$ ).

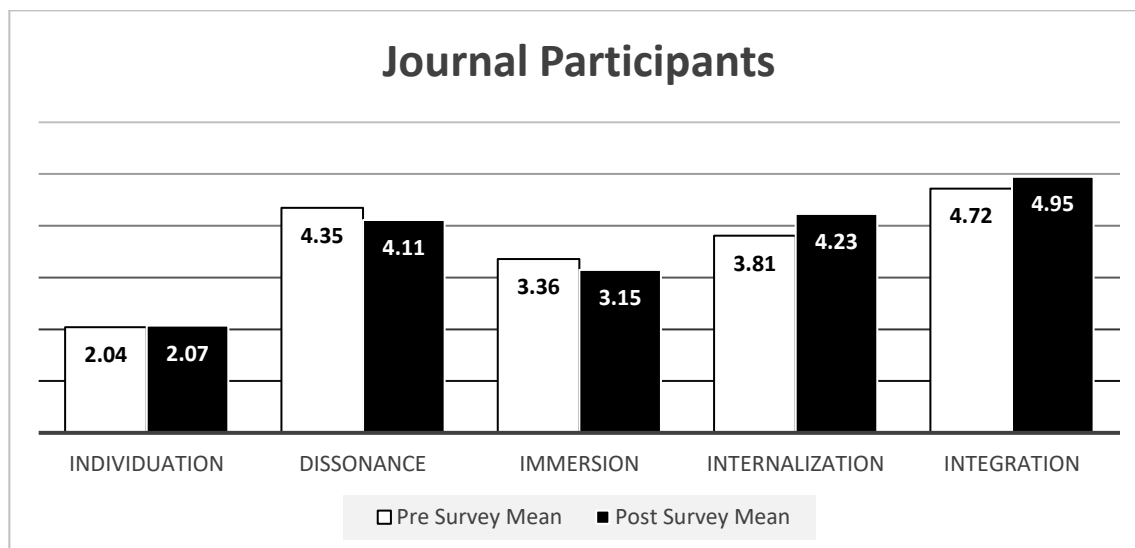
*Stage 5: Integration.* Integration paired samples t-test findings for participants providing journal indicated statistically significant findings at the .10 confidence level set for this pilot study ( $t = 1.71, p = .10, d = .35$ ; Table 5.7). The Cohen's  $d$  effect size indicated a small to medium effect of the intervention on participants<sup>18</sup>. The highest level of cultural competency in this study, it is interesting that those who chose to share their race reflective journals had statistically significant positive change at the institutional level of identity development (JohnBull, 2012; Myers et al., 1991; Sevig, Highlen, & Adams, 2000). Analyses of journal participants race reflective journals may provide insight into the changes across intervention sessions that led to these reported levels of cultural competence.

*Cultural competency change findings across stages 1-5 for journal participants.* The *journal participants* subgroup analyses found the most statistically significant positive cultural competency change for participants compared to the *all participants* and *participants without journals* findings. While the Immersion and Integration subscales were statistically significant at the pilot study confidence level of .10, Internalization was statistically significant at the more traditional  $p < .05$  levels. Additionally, the visual representation of mean score differences (Figure 5.4) illustrate respondents with low (Individuation) or reduced (Dissonance and Immersion) agreement lower end stages of the SII (Sevig, Highlen, & Adams, 2000), and

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<sup>18</sup> In-between .20, or small, and .50, medium (Cohen, 1988).

increased positive association with statements aligned with upper end stages (Internalization and Integration). Overall, the data provided by journal participants indicates that staff within this subgroup increased their cultural competency after engaging in equity and identity-focused intervention sessions which included critical reflection journal prompts.



*Figure 5.4.* Journal Participants pre-post mean score differences by SII stage.

**Qualitative findings.** This pilot study, a quasi-experimental, embedded, mixed method research design, utilized qualitative data to enhance understanding of the quantitative results (Creswell & Plano-Clark, 2011) found in research question two. The following qualitative findings of six journal participants are presented as representative samples to triangulate and further explain if and/or how participants' cultural competency changed from pre- to post-intervention by engaging in critical reflection after equity-focused professional learning sessions. Large qualitative data sets can become cumbersome, and samples of the whole can ensure richer data analyses (Miles, Huberman, & Saldana, 2014). There are a variety of qualitative data sampling methods; the following representative cases were selected through a combination of stratified purposeful sampling, based on quantitatively-identified subgroups, and comparable sampling choosing examples of participants with high, neutral, or low levels of cultural

competency that meet that criterion without quantitative information (Marshall & Rossman, 2014; Miles, Huberman, & Saldana, 2014).

Of the 26 participants who provided journals, one individual only submitted entries for three of the six prompts and was excluded as a potential sample. Three participants were selected through a stratified, purposeful, sample of journal participants whose journals were quantitatively representative of varying levels of growth (Marshall & Rossman, 2014; Suri, 2011; Onwuegbuzie & Leech, 2006). These three participants were initially selected for the mixed-method section and, *before* the mixed analyses, qualitatively analyzed. An additional three journal participants were selected through comparable sampling by deliberately searching for those confirming culturally competent entries (journal indicating culturally competent content at OTAID stages higher than the majority of participants), disconfirming culturally competent entries (journal entries indicating culturally competent content at OTAID stages lower than the majority of participants), and typical (Marshall & Rossman, 2014) of other cultural competency journal entries for a total of six qualitative samples (24% of the full sample). Marshall and Rossman (2014) indicated that mixed sampling is a commonplace occurrence that adds flexibility and increases triangulation.

Participant journals were analyzed using the OTAID (Myers et al., 1991) as a lens to identify the a priori theme of cultural competency through affective and In Vivo coding (Miles, Huberman, & Saldana, 2014). This theme is aligned with this study's literature review operationalizing the cultural competency construct as the acknowledgement of one's identity and how they respond to those with differing identities while acknowledging oppression experienced at the personal, interpersonal, or institutional levels (JohnBull, 2012; Mayfield & Garrison-Wade, 2015; Myers et al., 1991; Sevig, Highlen, & Adams, 2000). Each level is indicative of two

stages within the OTAID model (Myers et al., 1991; Table 5.9). As noted in chapter four, the sixth stage, transformation, is not used in this study as the spirituality component of the description is not a common measure of cultural competency (JohnBull, 2012).

Table 5.9

*OTAID Descriptive Terms used A Priori Themes*

Stage (Level)	Descriptive terms
1 – Individuation (Personal)	<ul style="list-style-type: none"> <li>• Connection to societal conventions</li> <li>• More likely to ascribe to group stereotypes</li> <li>• Identify with mainstream culture</li> </ul>
2 – Dissonance (Personal)	<ul style="list-style-type: none"> <li>• Alienation from mainstream society</li> <li>• Experience of vicarious or direct discrimination</li> <li>• Feelings of exclusion</li> </ul>
3 – Immersion (Interpersonal)	<ul style="list-style-type: none"> <li>• Feelings of pride when people identify with their subculture group</li> <li>• Negative feelings about the dominant culture</li> <li>• Negative feelings toward other subcultures or members</li> <li>• Negative feelings towards their own group without similar perceptions of oppression</li> </ul>
4 – Internalization (Interpersonal)	<ul style="list-style-type: none"> <li>• Positively integration of subgroup identity into their self-concept</li> <li>• Higher tolerance and acceptance of others</li> <li>• No longer threatened by their sense of self</li> <li>• Increased understanding of the nature of oppression</li> </ul>
5 – Integration (Institutional)	<ul style="list-style-type: none"> <li>• Recognition that the American social structure creates and perpetuates oppression</li> <li>• Greater unconditional positive regard for themselves, others, and all of life</li> <li>• Differences among all people are recognized and embraced.</li> </ul>
6 – Transformation (Institutional)	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

*Note:* Adapted from Sevig, Highlen, and Adams (2000) p. 170-171.

Participants completed race-reflective journals after each PD session using prompts aligned to Gorski and Dalton's (2019) typology of critical reflection responses. While the prompts were not designed to elicit information about cultural competency per se, they were

centered around each participants' experiences and beliefs aligned to equity and identity development. For each of the six sample participants, journal entries were read, and re-read for excerpts indicating ideas of self-identity and the understanding of those different from themselves. These passages were captured in a coding matrix divided by the first half (sessions 1-3) and second half (sessions 4-6) of the intervention (Appendix O). Each excerpt was analyzed for indicators specific to each stage and noted by the stage name and key terms. Viewing the quotes holistically, this researcher considered and noted the overall emotional response indicated by the participants' levels of cultural competency.

Each of the following qualitative narratives capture the perceived emotional response or intent in the subheading. Each participant had created a unique identifier to safeguard anonymity, however, to further deidentify the findings, the six participants were provided another codename and randomly assigned gender to ensure concealment of their identity. Participants Olive, Merlin, and Mesu were selected using quantitative pre-post trends as a stratified, purposeful, sample. Knowing the quantitative outcome of these three participants may have influenced the researcher's analyses, each was continuously compared to the analyses of those selected without quantitative background knowledge to counteract any potential preference between samples. Indeed, the researcher alternated the analyses (those selected with pre-post survey knowledge and those without) to further reduce any preconceptions. Furthermore, the researcher engaged peer reviewers to examine the analyses without knowledge of how each was chosen to check for any apparent biases in the findings. After the analyses were completed, the following narrative findings were ordered from lower to higher levels of responses as found within the OTAID continuum (Myers et al., 1991).

***Dusty's journals: An internal struggle.*** Dusty was selected for journal entries that, overall, illustrated more excerpts in a lower stage (Dissonance) of Myers et al.'s (1991) OTAID model. Thus, Dusty's journals were considered potentially disconfirming evidence of the higher levels found across other journal participants' reflections. However, Dusty's Dissonance passages waned over the course of the intervention, replaced with Immersion stage entries. This growth also indicated a move from more personal reflections to those within the OTAID *interpersonal* level.

Within her journals, Dusty self-identified as White; her belief in this identity had recently been challenged and revealed an internal struggle, "My identification as White means that I have typically felt centered. In this environment (our school) I see that I am not centered. I think it feels off balance, unknown, and leaning positive." Dusty embeds this excerpt with recognition of the work being done at TFES ("In this environment (our school) I see that I am not centered"); this may be a confirmatory response knowing her principal will read the anonymous entry. This Dissonance stage excerpt also illustrates the changes Dusty is experiencing as she experiences growth in her identity development by beginning to question her connection to the dominant culture. When Dusty refers to feeling "off balance," she likely is referring to a new understanding of how she has benefited from being White at the expense of others. In an environment (TFES) focused on understanding how mainstream identities may perpetuate oppression, individuals who had not previously reflected critically on their assumptions may feel very alone when seeing the effects of racism or discrimination towards others. Thus, Dusty noting that a feeling of the "unknown" is indicative of this personal level, *Dissonance* stage, of the OTAID described as beginning to feel *alienated* from mainstream society (Myers et al., 1991; Sevig, Highlen, & Adams, 2000). While she ends this quote with upbeat verbiage

(“leaning positive”), Dusty’s internal struggle is again mentioned in a later journal entry where she wrote:

In my larger family, there are always really insensitive comments made about lots of different groups of people and its hurtful and harmful. The stereotypes and comments are not things I address any more, but I sometimes wish that I had responded differently.

This aspect of Dusty’s identity is another Dissonance stage example within the OTAID *personal* level of identity development (JohnBull, 2012; Sevig, Highlen, & Adams, 2000). Dusty has chosen to circumvent this feeling of otherness from family members who voice and perpetuate stereotypes by not engaging in the discussion or accepting responsibility (“I *sometimes* wish that I had responded differently”) for calling family into equity-focused discussions. Familial struggles, such as Dusty’s, were discussed throughout the intervention sessions of this pilot study and often included shared feelings of distance or exclusion from family units when issues of race are broached.

Like us all, Dusty has multiple facets to her identity and, when she is in the role of educator, displays more confidence in her internal desire to engage in equity work. In support of others Dusty wrote: “[I can be] intentional about challenging any assumptions I may make of a student or their story... looking at students as a whole entity and not just a snapshot of something.” With this example, Dusty demonstrates a move towards the *Immersion* (stage 3), or *interpersonal* level, of identity awareness within the OTAID model with her focus to effect positive change for students by better understanding herself and her previous assumptions of different student groups. Similarly she wants this change for herself as Dusty explained her desire to do something in response to oppression:

Power over people is a common thread in our society, and it doesn't take much to maintain. Staying open to being made aware of the moments and comments of my own implicit bias and being able to tolerate that awareness (whether I realize it myself or someone points it out to me) is important.

Excerpts such as this Immersion (stage 3) example are intertwined throughout the intervention sessions providing context that Dusty was conflicted in her beliefs. Through this conflict, however, Dusty was also finding strength for her desire to move past the personal level of *Dissonance* she feels as an individual (and family member) towards the more interpersonal (Immersion stage) identity she adopts as an educator within the TFES environment. Dusty's critical reflections of her assumptions (Mezirow, 1997) across OTAID stages and levels may be indicative of an internal struggle between her personal and professional life. While Dusty's journey was chosen due to the lower levels of identity development shared in her journal entries, the authentic push and pull between her desire to improve her response to oppression and the reality of her day to day experiences may be felt by others who chose not to share their journals. In this way, Dusty becomes a courageous voice in her struggle to "tolerate the awareness" of implicit bias and thus improve her level of cultural competency.

***Olive's journals: Example of the 'Golden Rule'.*** Olive, who identified as South Asian, was initially selected based on the increases of her post-survey quantitative mean scores, especially within the Internalization and Integration stages of the OTAID. Olive's journals also showed qualitative growth at lower levels, focused between the Dissonance and Immersion stages, as her writing reflected ideas and ideals related to the adage of 'treat others as you'd like to be treated.' Colloquially known as the 'Golden Rule,' this quote, and others like it, are found throughout various cultures and religions (Internet Encyclopedia of Philosophy, n.d.).



To illustrate this idea of Olive's journal entries reflections illustrating the Golden Rule, an early response (session two) noted, "By respecting [the diversity of others] ...we can face these issues [of oppression] and make it useful for [education]." What is not apparent in this excerpt is if issues of oppression are understood by Olive and how those issues perpetuate inequities based on identities outside the dominant culture. An additional entry read, "I have been taught to treat everyone equally which always made me think, is it fair or is it not?" While not exactly noting that Olive *sees* everyone the same, she appears to see the ideas of equity and equality as synonymous. These passages are indicative of the *personal* level (Dissonance stage two) of identity development and a focus that she wants to be inclusive, wants to interrupt inequities, but feels to do so is to treat everyone well and that good nature will extend itself to others.

Olive's positive outlook and belief in others extends to difficult discussions such as informing individuals about their implicit biases that may be seen or felt by others. For example she noted, "There are ways to mitigate [microaggressions] in positive and productive ways through healthy dialogue, humility, and empathy." And, Olive noted in her next journal entry that, "The biggest mistake made by most parties guilt of inadvertent racism or microaggressions is [not listening] with an open mind.... They need to take it all in and learn...." These passages indicate that Olive has considered engaging in critical conversations and, at an *interpersonal* level of identity development as Olive clearly has a, "tolerant and accepting" outlook of all others (Sevig, Highlen, & Adams, 2000, p. 171). However, she also is indicating that any issue with oppression is on the part of others ("*They* need to take it all in and learn"). What is not clear is if Olive believes that she is able to mitigate the impact of those who unjustly impose their power and privilege upon those without it, because of her beliefs in others and a full

understanding of oppression (Internalization stage, Sevig, Highlen, & Adams, 2000). It is more likely that Olive's understanding is represented by Immersion, stage three, as she grapples with the oppressive responses of others and seeks for them to treat her with the fairness she believes all should ascribe.

***Mesu's journals: On the edge of change.*** This participant was purposefully chosen based on her quantitative data which appeared to indicate a decreased in reported cultural competency as measured by her responses to the SII (Sevig, Highlen, & Adams, 2000). However, her qualitative journal entries support much more nuanced findings as Mesu's growth was centered in understanding who she is, where she belongs, and what she hopes to accomplish with others. All of this was identified within the Immersion stage of the OTAID model (Myers et al., 1991) and illustrates the inter-stage growth that needs to occur with individuals before understanding of another stage or level transpires.

Mesu identifies herself as Black in her journal entries and that, in America she knows, "...how it feels to be treated differently." This truth is found, to some extent, within all six of Mesu's intervention session journal entries along with a desire to move past that feeling not only for herself but for students and other adults. For example Mesu wrote, "I am always willing to speak on how I feel about race. I want to be a voice for others who may feel like they don't have a voice." This initially seems like Mesu feels empowered to be supportive of others and is beginning to understand the oppression and how to respond to it positively. However, she continues with, "I feel like talking about the injustice of race is harder when talking to people that look like you." While both statements are within the OTAID *interpersonal* level of awareness, Mesu is on the edge of the *Immersion* and *Internalization* stages within that level (JohnBull, 2012; Myers et al., 1991; Sevig, Highlen, & Adams, 2000). Mesu clearly wants to

support others with issues of racial oppression but finds a disconnect with others in her subgroup who may not share her beliefs (Immersion, stage three).

Alternately, Mesu's reference to "talking about the injustices of race" with other Black individuals may have just been difficult at the time for Mesu based on events that occurred contemporaneously with her journal entries (Black Lives Matter protest marches, the 2020 National election, etc.). Mesu wrote, "As a Black culture, we look at the strengths that our people represent but other cultures look at the weaknesses that the media feeds to them." Negative feelings towards the mainstream culture are typical within the Immersion stage of identity development (Sevig, Highlen, & Adams, 2000) as is Mesu's statement regarding the strength of her identification with her Black culture.

Throughout her journals there is an undercurrent of emerging change for Mesu, a feeling that she is on the edge of a deeper awareness of herself and the nature of how that understanding of herself impacts her responses to others. The growth for Mesu is subtle, but relevant. Across intervention sessions she considers her identity development and how others impede or support her sense of belonging. In the first session Mesu discussed knowing "how it feels to be treated differently," which bridged the Dissonance and Immersion stages (experienced alienation with negative feelings about the dominant culture; Sevig, Highlen, & Adams, 2000). By the last session, Mesu describes her willingness to discuss issues of race, even when difficult with those who "look like you" (in Mesu's case, those who are Black) which is moving through the Immersion stage (negative feelings towards own group who see oppression differently; Sevig, Highlen, & Adams, 2000) and towards acceptance (Internalization). Thus, the *edge of change* terminology used to describe Mesu indicates her range of identity development from the beginning to the end of the Immersion stage with hints of Internalization (stage four) to come.

***Merlin's journals: Challenging his beliefs.*** Merlin did not self-identify by race as he utilized his journal entries to investigate, acknowledge, and challenge current beliefs. Merlin was chosen initially as a purposeful sample indicative of consistent quantitative data reported pre- to post-intervention. His journal entries also illustrate reflection at a consistent level (interpersonal, Immersion stage three) yet quite variable within that designation as Merlin considered intervention content and how it resonated with his identity and how he interacted with those different than himself.

In the first session's journal entry Merlin noted, "I have found that my previous assumptions about my students included [stereotypes regarding low SES and poor behaviors with Black children]. Unfortunately, I did not know I had these biases when I first started teaching." Merlin's angst is palatable in that he is personally surprised in the assumptions he made towards students and establishes movement from *personal* to *interpersonal* levels (Immersion, stage three) of the OTAID framework, specifically by understanding the impact of discrimination and beginning to value different aspects of his student's, and his own, identity (JohnBull, 2012; Sevig, Highlen, & Adams, 2000).

Merlin's first reflection becomes his foundation for challenging his beliefs as a later entry stated, "It will take critical analyses of every situation, especially if my decisions impact others, to make sure there are no instances of oppression due to my biases." To move from being "unaware of biases" when Merlin began teaching to a decision to acutely assess situations to prevent bias reveals a level of critical reflection necessary for Merlin to make truly transformational changes in his levels of cultural competency (Mezirow, 1997; 1998). It is not the assertion of this researcher that transformation already occurred (the quoted journals entries were written approximately six weeks apart) but that Merlin was indicating an intent to do the

work necessary to change his frame of reference leading to transformative change (Mezirow, 1997) and higher stages of cultural competency along the OTAID continuum (Myer's et al., 1991). An example of the work still to do for Merlin is seen in another, later, journal entry:

I really want to get better at pointing microaggressions out and making that person clarify or confront what they just said or did. I am a conflict avoider and peacemaker by nature though, so this is something I have to consciously work through.

Merlin's assertion to work past his comfort level with conflict appears more about the internal struggle of *how* to connect with others when trying to implement micro-interventions, or responses to observed or received microaggressions (Sue et al., 2019), rather than being prepared to engage in a confrontation with those engaging in microaggressions. The uncertainty about what will happen if the tangible nature of implicit bias is questioned often leads individuals to walk away from microaggression discussions (Sue et al., 2019). Merlin's session five journal entry, written at the *Immersion* stage of the OTAID, explored various identity subgroups and views of oppression (JohnBull, 2012; Sevig, Highlen, & Adams, 2000). This session challenged Merlin's beliefs about when he should confront his own desire to "be a peacemaker" and support those different than himself. Combined with his early journal reflections, Merlin's response to the pilot study interventions included identification of bias and an increased understanding of his part within a system of oppression.

***Pepper's journals: Equity and identity advocate.*** Pepper was identified through comparable sampling as an example of typical responses across the majority of participants. Pepper's journals had a relatively even distribution of Immersion and Internalization (stages three and four) responses within her six intervention session entries. Indeed, she moved back and forth between them which, on the surface, may appear Pepper's growth was minimal or stagnant.

However, the issues highlighted from Pepper's journals show the complexity of her experiences, thought processes, and desires to better advocate for both students and adults. There is growth within her process of critical reflection as she begins integrating her self-concept with a fuller understanding of oppression (Internalization stage four; Sevig, Highlen, & Adams, 2000) and how she wants to respond to it.

Pepper self-identified as multiracial and used both past and present experiences to describe her beliefs around identity and oppression. The following is indicative of Pepper's overall beliefs as noted throughout her journal entries:

I can address my own implicit biases and point it out when I see it in others. I can also do my best to educate others about the impact implicit bias has and why it is important to come to terms and fight against it ourselves.

This statement illustrates Pepper's confidence in her understanding of implicit biases, that she has her own, and that she has the skills to support others in understanding and working against bias impacting others. Pepper's entry falls within the *Internalization* stage and *interpersonal* level of the OTAID model in that it demonstrates her clear sense of self and an understanding of how oppression impacts others (JohnBull, 2012; Sevig, Highlen, & Adams, 2000). In another journal entry, Pepper provides some background that supports her advocacy against implicit bias:

Growing up, I always felt like I didn't belong with a group of kids for various reasons, I wasn't Black enough, too White, wasn't White enough...there was always a reason. It has made me very sensitive to the way students leave each other out of things, not just because of race but for any reason.

Pepper's multiracial identity clearly had an impact on her as a child, not knowing where she fit or how she belonged. Herman (2009) investigated how racial contexts (such as Black or White)

impact multiracial students and proposed that the implicit biases and stereotypes perpetuated in these contexts inform the identity of multiracial students. For Pepper, who noted that she moved a lot as a child, her racial context was fluid, and her resulting childhood identity was one of not belonging. Through her role as an educator, Pepper wants to prevent her childhood feeling of isolation in others. This advocacy is not limited to students but also adults; returning to Pepper's previous quote she wants to ensure others know why it is so important to fight against one's implicit biases. In this way, Pepper shows her empathy for others, regardless of their subculture group or multicultural identity, and wants to ensure that they are not only accepted but *feel* that they are accepted. Pepper's focus on this goal for other is another indication of her Internalization stage of identity development and interpersonal level of awareness (JohnBull, 2012; Myers et al., 1991).

Pepper also described the connection between implicit bias and oppression in her journal entries. Focusing on microaggressions in another journal entry (two of the six intervention sessions centered on microaggressions), Pepper discussed the difficulties of speaking up:

The only way to disrupt microaggressions is to change the way the person thinks, which is not always easy. I cannot think of many times that I have responded to microaggressions towards others, but I should be as advocative for others as I am for myself.

Pepper's response, again, shows empathy for others as she realizes that she has encountered negativity directed at herself without extending it to others (that she can think of), and she wants to change that narrative. While this excerpt is another example of Pepper's Internalization stage of the OTAID model, she is revealing her *growth* within that interpersonal level as her critical reflection describes an understanding of how oppression impacts others and how her positive

self-concept can be utilized to ameliorate negative effects (JohnBull, 2012; Sevig, Highlen, & Adams, 2000). This does not preclude Pepper from having concerns, as she noted in her journal entry, “I would be least likely to express injustices of race with a group of White upper-class adults if I am the only Black middle-class adult in the room.” This line does not impede the growth noted for Pepper as it is a reality of safety concerns (personal, professional, physical, and psychological) she no doubt must face as a person of color. From the critical reflection journey, Pepper shared in her journal entries, it is clear that her overall focus is on moving forward to advocate for herself and for others.

***Chena’s journals: Desire to be a disruptor.*** Chena was selected for her journals illustrating both reflection of the intervention content and a resulting, overall, increase in her cultural competency. Moreover, Chena’s stages of identity development were complex, at high levels, weaving within the Internalization and Integration stages, sometimes within the same journal entry. Thus, the increase in Chena’s qualitative cultural competence, like so many others, is found within the warp and weft of that weaving and the overall picture created over time, or in this case, over the course of the intervention.

The term disruptor is defined as a person who interrupts the normal course of events or throws them into disorder; from the word *disrupt* (Merriam-Webster, n.d.). Chena, who identified as White, consistently indicated actions in her journal entries specific to interrupting implicit bias and oppression; to create disorder in the established norm. For example, Chena’s first journal reflection illustrated a consistent commitment to changing the oppressed experience of others when she shared, “My job is to advocate for needed change on all fronts. This impacts who I vote for...the conversations had with White students and students of color...and my own willingness to accept that there is life-long learning and lessons [to do so].” Here, Chena is



recognizing the system that has been created in the United States. By challenging her part in that system, Chena demonstrates Integration stage cultural competency through her *institutional* level interactions with others and continued actions recognizing all that she still needs and wants to learn (JohnBull, 2012; Sevig, Highlen, & Adams, 2000).

In another early intervention session, participants responded to a prompt asking them to describe what oppression means, how implicit bias contributes to that definition and what they can do about it. Chena's reflection included:

I can be more willing to share feelings [about bias and oppression] with students and staff I work with and with my own friends and family. It is of course easier and more comfortable not to point such things out – however, if I am committed to being an agent of positive change and trying to help break down oppressive systems and structures, I have to be willing to move past what is easy and comfortable.

In this quote Chena is moving back and forth from the Internalization and Integration stages of the OTAID model by recognizing the nature and perpetuation of oppression and how to support others in that understanding. Simultaneously, it is not an easy task (more comfortable *not* to point such things out) for Chena and she feels she can be “more willing” to take on this work with others.

Other examples of Chena exploring ongoing personal learning experiences occurred in the second half of the intervention (sessions four through six). For example, speaking on microaggressions Chena noted, “I think it is important as much as possible to discuss microaggressions as they occur [and] I also feel like I am getting better at interrupting and challenging microaggressions personally and professionally.” This is an example of critical reflection where Chena is considering what she believes, how it is changing, and what she needs

to do to internalize her transformed beliefs (“I am getting better at interrupting and challenging microaggressions...; Mezirow, 1998). This excerpt by Chena was followed in the next session with, “As for expressing injustices of race...[While] I believe I have come a long way, there are definitely times when I have not said anything, not said enough, or backed down when maybe I should not have.” It is the combination of these two passages that best illustrate the continued interweaving of Chena’s stages of identity development are visualized. Chena clearly acknowledges the identities and understands the nature of oppression (Internalization, stage four; JohnBull, 2012; Sevig, Highlen, & Adams, 2000). However, Chena also described “getting better” and “times when I...backed down” in these two reflections that demonstrate the ongoing development of her identity tapestry, just shy of the “unconditional positive regard for herself and others” (Sevig, Highlen, & Adams, 2000, p. 171) that would move her solidly into the Integration stage (institutional level) of the OTAID model (Myers et al., 1991).

***Qualitative cultural competency trends across journal participants.*** For each of the representative participants, this researcher found journals that couched responses with qualifiers (terms such as, “I can do better”, “linked to my fears” and, “I have to be willing”) across all indicated OTAID stages and levels of identity development (Myers et al., 1991). As TFES faculty engaged in equity and identity focused professional learning, they grappled with their individual response to identity threats such as microaggressions, stereotypes, academic tracking, and implicit bias. Their critical reflections around these topics centered *most* journal entry examples of cultural competence in the *interpersonal* levels (Immersion and Internalization) of the OTAID model (JohnBull, 2012; Myers et al., 1991; Sevig, Highlen, & Adams, 2000).

This pilot study extended TFES’s in place equity- and identity-focused professional learning with participants’ engaging in critical reflection through race-reflective journaling. Each

of the six participants individual journal responses were written at similar stages of identity development without wide variation. For example, most of Chena's journal entries centered around the Internalization stage and Olive's an even mix of Dissonance (first half of the intervention) and Immersion (second half of the intervention) stages of the OTAID model. While these participants' entries did not show major changes in identity development stages as described by the OTAID model, the content within the journals across all sessions illustrated challenges to current belief structures, a necessary component to transformative learning (Mezirow, 1997). Integrating these qualitative data with the quantitative findings revealed additional insights regarding cultural competency changes across the TFES faculty after engaging in critical reflection and equity professional development.

**Mixed method findings.** The following section utilized joint displays that included journal excerpts to further explain if and/or how participants cultural competency changed from pre- to post-survey by engaging in critical reflection after equity-focused professional learning sessions. Participants who submitted journals *and* completed both the pre- and post-surveys (N=22) were included in a review of pre-to-post survey mean scores for each of the SII subscale composite variables (see Appendix N). Reviewing pre-post survey trends resulted in a stratified, purposeful, sample (Marshall & Rossman, 2014; Suri, 2011; Onwuegbuzie & Leech, 2006) of three representative participants whose quantitative data seemed to indicate an increase, decrease, or no change in their cultural competency as measured by the SII (Sevig, Highlen, & Adams, 2000).

In embedded, mixed method, designs, quantitative intervention outcomes can be better understood with the "qualitative voices of participants" (Creswell, Shope, Plano Clark, & Green, 2006, p. 4). The researcher chose to use a joint display to mix pre- and post-survey means, and

tables providing visual representations of that quantitative data, of three representative participants. Journal excerpts are included as qualitative indicators from the first and second three sessions of the intervention study. These excerpts are coded as representative stages (Individuation, Dissonance, Immersion, Internalization, and Integration) within the OTAID framework (Myers et al., 1991). Finally, the statistical significance findings of the journal participants' quantitative data are included as an anchor of the full sample (N=22) that the three sample participants represent. Taken as a whole, the findings gleaned from the mixed method analyses supports an identified theme of *positive changes in participants' cultural competency*.

Reviewing the joint display (Figure 5.5), the graphics on the far left provide a visual representation of the researcher's impression each participant's data and journal entries. For Mesu, the multi-hued patchwork of brown labeled *In My Skin* (Race Pride, n.d.) and the researcher's notation, *Understanding who I am, first*, provides a glimpse of Mesu's growth through an internalized identity journey. By contrast, Merlin's graphic illustrates varied, multicultural, hues within almost DNA-type imagery that denotes identities beyond skin tone (Hui, 2017). The notation, *How I saw identity is not who I want to be*, provides an indication to the reader that Merlin's growth is steeped in understanding who he has been and how to move forward. Olive's "The Golden Rule" image (Hudson, 2021) and the researcher's note: *Belief in the goodness of others*, is swathed in a bright yellow hue illustrating Olive's positive outlook towards other individuals and equity work. The graphic enhances this belief with a series of multi-ethnic hands coming together to create a heart shape which, to this researcher, represents an idea that leading with love brings people together to enact ideas of equality for, and towards, all as expressed in Olive's reflections.

The last row of the joint display highlights the joint changes in each of the stratified,

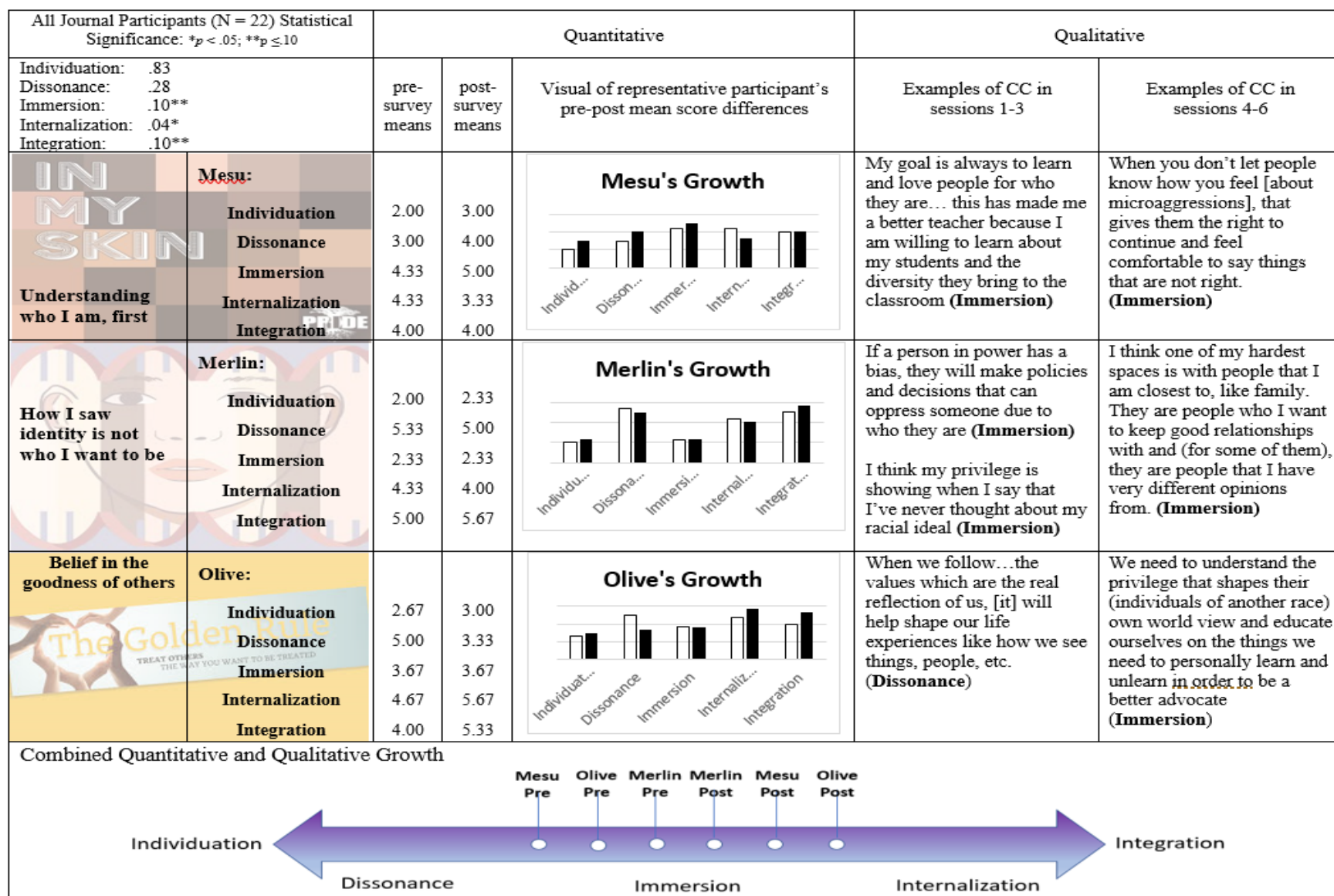


Figure 5.5. Positive changes in participants' cultural competency. This Joint display of stratified, purposeful, sample journal participants' cultural competency changes over the course of the intervention illustrating quantitative, qualitative, and mixed results.

purposeful sample participant's (Marshall & Rossman, 2014) growth from pre-survey, through the journaling process, to post-survey. This growth continuum, in a timeline-like format, becomes a visual counterpart to the first column graphics to provide an understanding of Mesu, Merlin, and Olive's respective journeys. This understanding may seem incongruous to the graphs illustrating the quantitative differences each of these individuals reported in this quasi-experimental intervention pilot study. However, the researcher determined starting and end points by combining the pre-intervention survey data with early qualitative excerpts (sessions one through three) and post-intervention quantitative data with later journal reflections (sessions four through six).

Quantitatively, Mesu, Merlin, and Olive represented decreased, neutral, or increased cultural competency as measured by pre-post SII surveys (Sevig, Highlen, & Adams, 2000; respectively). However, a comparison of their reported quantitative beliefs to these participants' race-reflective journal excerpts indicated inconsistencies between Olive and Merlin's quantitative and qualitative data, especially between the Integration (quantitative) and Immersion (qualitative) stages. Merlin, however, also displayed a steady quantitative and qualitative focus on the Immersion stage of the OTAID model. Mesu also illustrated steady Immersion stage qualitative data that contradicted the overall decrease in her quantitative data at almost every OTAID subscale. Interestingly, the majority of all three sample participants' qualitative excerpts were aligned to the Immersion stage, reflective of a sense of belonging to their identified group with a negative affect towards those who do not have similar ideas of identity and oppression (Sevig, Highlen, & Adams, 2000). Their growth lies within depth of qualitative response and how those journal entries provide insight into their reported quantitative change.

***Mesu: Understanding who I am, first.*** Mesu was the only sample participant whose highest level of reported SII stage agreement (Immersion, stage 3; Sevig, Highlen, & Adams, 2000) matched the identity-development stage in her journals indicating that her comfort zone resided in understanding her identity and a desire to interact with others who have similar beliefs regarding oppression. On the surface, these data do not indicate an increase in cultural competency for Mesu between the start and end of this study's intervention. In fact, quantitatively, Mesu increased *lower* stages of cultural competency (Individuation and Dissonance) while decreasing her Internalization stage (from 4.33 or slightly agree to 3.33 or slightly disagree) and having no changes to her Integration stage.

These findings are counter to what would be expected in an individual increasing their cultural competence. Furthermore, the entire journal participants sample (N = 22) showed statistical significance at the pilot study confidence level (.10) for *decreasing* Immersion, so Mesu's increase is an anomaly. However, considering her qualitative analyses (above) and excerpts within the joint display, Mesu showed growth within her own identity development by moving from ideas of, "learn and love people for who they are...", to ensuring that individuals know when they have harmed her: "When you don't let people know how you feel [about microaggressions], that gives them the right to continue and feel comfortable to say things that are not right." The second quote shows an extension of the first in that Mesu is no longer just "learning about my students," but also indicated advocacy for herself and how others may treat her. All combined, Mesu's data illustrated clear growth through an understanding of herself which is necessary to effectively move through the cultural competency stages described in the OTAID (Myers et al., 1991).

***Merlin: How I saw identity is not who I want to be.*** The most steadfast of the three participants selected for mixed method analyses, Merlin's data (quantitative, qualitative, and mixed) suggests, at first glance, little growth from pre- to post-intervention. Merlin's reported pre- to post-survey quantitative data in the joint display (Figure 5.5), illustrated the slightest differences in Individuation, Dissonance, and Internalization (.33 in either direction), and no change (2.33 pre- and post-survey) in Immersion. However, as noted in the qualitative findings (above), Merlin's journal entries provided examples of cultural competency increases within the Immersion stage (stage three, interpersonal level) as he challenged his own beliefs of oppression, privilege, and advocacy. Furthermore, Merlin's quantitative Integration data showed a higher reported mean score difference post-survey (5.00, or agree, to 5.67, just under strongly agree), so combined growth did occur, even if tightly constrained between the beginning and end of the intervention.

Merlin's graphic within the joint display was described as an indicator of his understanding of who he has been, how he's seen others, and where Merlin would like to go with his identity development. In an early journal entry Merlin shared, "I think my privilege is showing when I say that I've never thought about my racial ideal." While Merlin was fully comfortable in his sense of belonging to his subculture group at that time (interpersonal level, Immersion, stage three), by the end of the intervention Merlin was considering the negative feelings he had for those within his own subgroup, specifically family, who he wanted to keep "good relationships with and they are people that I have very different opinions [about race]." Both excerpts represent an Immersion stage of identity development, but Merlin is acknowledging the differences in how he sees identity and a desire to change his own narrative.



The resultant growth revealed by Merlin is thoughtful, authentic, and unlikely to be a result of social desirability bias towards this researcher (his principal).

***Olive: Belief in the goodness of others.*** Of the three stratified, purposeful, sample participants, Olive's pre- to post-surveys indicated the largest reported mean score differences in the areas of Dissonance (decrease from 5.00, or agree, to 3.33, slightly disagree) and Integration (increase of 4.00, or slightly agree, to 5.33, agree). Moreover, the direction of these changes both indicated a positive response (reduction in Dissonance and increased agreement in Integration). Internalization, which presented statistically significant findings for the full group of journal participants (N = 22), was similarly positively changed for Olive (pre- to post-survey changes of 4.67 to 5.67). While Olive's qualitative data also showed growth, her early to late session journal entries began and ended at lower levels of cultural competence as indicated by the OTAID model (Dissonance to Immersion, respectively; Myers et al., 1991).

Olive identified herself as South Asian which is important for journal entries referring to her identity, how she sees other people, and understanding the privilege held by others (presumably by those who are White). Referring to the quotes in the joint display, Olive's early sessions included reflections regarding following the values that reflect her identity which will "help shape our life experiences like how we see things, people, etc." This excerpt reveals Olive's disconnect from mainstream society (Dissonance, stage two) and the joint display (Figure 5.5) reference to her belief in the goodness of others (which does not necessarily choose to perceive the oppression perpetuated by some). By the second half of the intervention sessions, Olive is extending her thinking to understanding privilege and the need to, "...educate ourselves on the things we need to personally learn and unlearn in order to be a better advocate." This Immersion (stage three) response acknowledges an increase in Olive's understanding of her

identity and how the dominant culture impacts her subculture group. While her journal entries from the latter half of the intervention sessions continued to suggest the adage, “treat others as you would want to be treated” (Golden Rule, n.d.), combined with Olive’s quantitative data, her qualitative insights may have provided the depth of understanding needed to think differently about individual items within the SII (Sevig, Highlen, & Adams, 2000). Even a change in a few SII items could lead to changes in Olive’s reported belief levels that could indicate growth in her quantitative cultural competence from pre- to post-intervention.

***An Integration item of interest.*** All three sample participants provided mostly Immersion-stage qualitative journal entries that did not align to their quantitative data; however, Olive and Merlin also increased their quantitatively-reported cultural competency along the Integration stage which acknowledges the institutional impacts of systems that perpetuate oppression (JohnBull, 2012; Sevig, Highlen, & Adams, 2000). The Integration findings for *all journal participants* (N=22) were statistically significant at the confidence level for pilot studies ( $p = .10$ ) and for these sample participants, Olive increased her mean scores from slightly agree to agree (4.00 pre-survey to 5.33 post-survey), Merlin increased from agree to just under strongly agree (5.00 pre-survey to 5.67 post-survey), and Mesu’s reported Integration mean scores did not change (4.00 or slightly agree for both the pre- and post-survey). These findings are notable as the lower Internalization stage only showed Olive with reported mean score increases.

An analysis of the Integration items within the condensed SII provided to TFES faculty indicated that one question, SII item 15 (*I would have as a life partner a person of a different race*), was the difference between the sample participants pre- and post-survey results (Table 5.10). While all three increased their agreement with this item, Olive and Merlin moved from

slightly disagree to strongly agree and agree, respectively (whereas Mesu, whose Integration score did not change—4.00 pre- and post-survey—moved from strongly disagree to disagree).

Table 5.10

*Sample Participants Pre-Post Survey Responses*

Participant	Item 15 pre-survey	Item 15 post-survey
Olive	3	6
Merlin	3	5
Mesu	1	2

Re-reviewing Olive, Merlin, and Mesu’s journals for references to interracial partnerships, only one entry was found. Written by Merlin, in session one, he noted that a *previously* held stereotype he had was that students from interracial families experienced a, “hard life at home” followed by a memory of where that belief was born. However, Merlin does not revisit this story in subsequent journal entries and neither Olive nor Mesu have any reference to the topic of different-race relationships. The closest topic was found with Olive and Merlin’s individual references to racial advocacy and familial relations. Olive discussed having to “learn and unlearn” aspects of ourselves and racial privilege, while Merlin indicated that advancing racial topics with family is one of the most difficult areas for him in his equity and identity journey (Figure 5.5). Both of these Immersion stage journal entries noted moving through current beliefs, or the beliefs of those close to them, to more inclusive beliefs. It may have been that the more comprehensive ideas Olive and Merlin reflected upon also dealt with interracial relationships as indicated by the quantitative data.

***Mixed method findings summary.*** The joint display (Figure 5.5) provided essential information on the changes in TFES staff’s levels of cultural competency including how the sample respondents’ qualitative data, provides insights otherwise missed by a survey alone.

While the pre- and post-surveys were provided to TFES faculty 16 weeks apart, critical reflection using race-reflective journaling occurred after each professional learning session (approximately every three weeks). The critical reflection prompts were not developed using the OTAID model as a guide and respondents were not asked specifically about cultural competency or identity development beliefs. However, their quantitatively reported levels of cultural competency did increase between the pre- and post-surveys after engaging in critical reflection following equity-focused professional development. As seen with Integration-stage item 15, it is possible, if not likely, that critical reflection allowed participants such as Olive and Merlin to grapple with new ideas learned in the professional development sessions at a mid-level (Immersion stage 3 or interpersonal; JohnBull, 2012; Sevig, Highlen, & Adams, 2000) that, over time, resulted in changes across the full continuum at statistically significant levels. Moreover, for participants such as Mesu, whose pre-post data indicated potentially decreased beliefs, her journal entries may be where the growth was truly apparent, and therefore seen with just as much meaning and importance as any pre and post score.

### **Process Evaluation Findings**

This section, focused on two process evaluation research questions, utilized the researcher's field notes and principal's journal to analyze dosage, participant responsiveness, and project implementation of the intervention described within this pilot study. These aspects of the intervention are indicators of implementation fidelity (Dunesbury et al., 2003). Each question draws on the combinations of those three constructs supported by the quantitative data in Table 5.11. As a pilot study, variations in the implementation of the intervention become important information for potential future confirmatory research (van Teijlingen & Hundley, 2001) and

Stufflebeam (2003) stresses the importance of observing the implementation of intervention activities, and providing accountability records, to improve understanding of study outcomes.

Table 5.11

*Dosage and participant responsiveness*

	Number of Participants	Start to End Time	Number of Participants Sharing Whole Group	Median Time Observed Journaling
Grounding Day One	82	1.5 hours	n/a	n/a
Grounding Day Two*	78	2.0 hours (avg)	19**	n/a
Session One	80	1.5 hours	10	15 minutes
Session Two	75	1.75 hours	12	11 minutes
Session Three	81	1.75 hours	11	20 minutes
Session Four*	81	1.5 hours (avg)	14**	not observed***
Session Five	80	1.5 hours	12	10 minutes
Session Six*	81	1.25 hours (avg)	12**	10 minutes (avg)***

Note: \*Indicates whole group was broken into smaller groups to receive content; \*\*total staff sharing with whole small group added across sections; \*\*\*researcher was not able to keep participants on zoom (session four) or the full time (session six) while they journaled due to start of next group.

**To what extent did the participants engage in the intervention according to the intervention plan?** As noted in Table 5.11, a minimum of 91% of TFES faculty participated in each of the two grounding and six intervention sessions (as noted in 75/82 in session two) which ranged in length from 1.25 hours to 2.0 hours including a median journaling time between 10 and 20 minutes for the intervention sessions. In fact, the dosage was approximately 50% over the intended amount of professional learning time without loss of participant responsiveness. These data points are indicators that the TFES faculty received an effective *dosage* of intervention

activities as measured by attendance and the length of the received treatment (Dunesbury et al., 2003).

The time TFES faculty spent journaling is also indicative of their *responsiveness* to the intervention. Each intervention session was designed to have 40 minutes of content and discussion followed by up to 20 minutes of participants responding to a critical reflection prompt in their race reflective journals. These 20 minutes were designated with the understanding that some would end more quickly than others. The session discussions extended beyond the planned 40 minutes, yet the TFES faculty continued to maintain median journaling times of no less than 10 minutes, exactly half of the planned 20 minutes for writing. However, this minimum median time was during the last three sessions of the intervention activities and reflective of a reduction from longer times during the first three sessions.

An accurate timing of journaling was not possible for each intervention activity; due to social distancing requirements during the COVID-19 pandemic, sessions were provided over Zoom (n.d.) and participants could exit before their journal was completed. Additionally, two sessions were not observed with fidelity due to extended discussion time allotted to participants. Even with this limitation, and the median time of journaling reducing from session one to session six, research question one findings did indicate that TFES faculty levels of critical reflection increased over the course of the provided intervention activities. This may be due to the sustained duration provided this pilot study. Beginning with the grounding days, which provided important definitions and collegial identity work, the activities within this pilot study occurred every two to four weeks for over five months and totaled more than 12 hours. Darling-Hammond, Hyler, and Gardner (2017) noted that, “By promoting learning over time, both within and between sessions, PD that is sustained may lead to many more hours of learning than is

indicated by seat time alone” (p. 16). Importantly, this intervention is predicated on the theory of transformative learning using critical reflection to change one’s frame of reference (Mezirow, 1997; 1998) towards one’s identity and the identity of others. Based on the researcher’s principal journal noting TFES faculty comments in-between sessions (texts, emails, and in-person conversations), additional personal reflection was ongoing. Thus, a reduced time journaling over the course of intervention sessions, resulting in more critically reflective content, is not incongruous but rather indicative of participant responsiveness in and across their professional learning experience.

Finally, when considering participant responsiveness in this pilot study, a range of 13% to 17% of TFES faculty chose to share their thoughts and feelings with the larger group in any given session. The researcher’s principal journal and field notes indicated that those staff members choosing to share were not all the same individuals from session to session which is important as the number per session did not vary widely or decrease steadily over time. While the percentage may seem small, the effect was powerful on other TFES participants. As indicated by a participant to the researcher after the first session, and captured in her principal journal, “This PD is great! No matter where people are, they have multiple entry points that push them further... and, hearing everyone speak and share is so powerful.” Thus, even those not outwardly responsive through whole group sharing were receiving additional dosage through the additional time *listening* to those who did.

Dunesbury and colleagues (2003) stress that the effectiveness of an intervention’s outcomes needs to be determined by more than one measure. Utilizing the varied participant dosage and responsiveness data provided in Table 5.11, and qualitative support from the

researcher's field notes and principal's journal, this research question can be answer by stating that TFES faculty engaged fully in, and beyond the design of, the intervention activities.

### **How did the designed intervention activities meet the intended outcomes?**

Stufflebeam (2003) noted that process evaluation was a useful process to determine if an intervention was implemented effectively. Several evaluation strategies included review and feedback of the proposed activities, careful documentation of the executed activities, and thorough review of the content and field notes after the study's conclusion (Stufflebeam, 2003). Each grounding and intervention session in this pilot study was thoroughly reviewed by the researcher's advisor before it was presented to TFES faculty. Careful field notes were taken by the researchers throughout the intervention session including the number of participant speakers and the time spent journaling (see Table 5.11). These data indicate that the intervention content was implemented as designed. Further, the researcher did not anticipate the number of staff who would volunteer to share their breakout room discussions with the whole group. As captured in the researcher's principal journal entry for session four:

Both [of the half-faculty] sessions went approximately 1.5 hours because of staff wanting to share - with the exception of the first grounding session, every session to date has run long. Interestingly, several staff have shared texts, emails, or discussed in person how hearing from each other has been some of the most meaningful experiences and how they have never had the time in/at other schools to do so. In this way, the pandemic has been a positive force for this intervention - by limiting sessions to workdays and county-provided "asynchronous" days (day for staff learning, as well as team planning and grading), we are able to extend past the [planned] one hour, before school, in-person...PD sessions and thus, staff either would have been less likely to volunteer



(knowing that time was limited) or staff wanting to share might have been cut off from articulating their story or perspective.

Thus, the unanticipated effect of additional discussion time may have actually supported the study's intended outcomes by extending the participants' engagement with the provided content.

This pilot intervention study sought to reduce participants' implicit bias while increasing their cultural competency and critical reflection as measured by the Sevig, Highlen, and Adam's (2000) SII and Gorski and Dalton's (2019) typology of critical reflection, respectively. As indicated in the process research question findings, the goals of delivering the content and engagement in reflective journaling were met. While the dosage was higher than planned, all intervention content was implemented with fidelity which supported the (unanticipated) high level of participant responsiveness that supported the study outcomes.

## **Discussion**

This study investigated the impact of a quasi-experimental pilot study on participants cultural competency and level of critical reflection after engaging in equity and identity-focused professional development. The researcher utilized a variety of research and instrumentation in new ways to investigate their impact on an elementary school faculty's implicit bias reduction and development of critical reflection through race-reflective journaling. By implementing and evaluating these pilot study activities, new instrumentation and analyses can be evaluated for possible confirmation studies (Van Teijlingen & Hundley, 2001). This pilot study utilized Gorski and Dalton's (2019) critical reflection typology to create journal prompts and determine the approach-levels of participants' race-reflective journal responses using directed content analysis (Hsieh & Shannon, 2005; RQ1), and Sevig, Highlen, and Adams' (2000) Self-Identity Inventory to measure quantitative change (RQ2). Additionally, RQ2 reflected an embedded mixed-

methodology where a subgroup sample of respondent's journal reflections were qualitatively analyzed using Myers' et al.'s (1991) OTAID model followed by mixed analyses using joint displays (Creswell & Plano Clark, 2011).

Myers' and colleagues (1991) OTAID model, combined with Mezirow's (1997) transformational learning theory, was introduced in chapter three and served as the conceptual framework for this study (Figure 5.6). While the full framework included distal outcomes such as influencing instructional practices to impact academic disparities between racial subgroups, the outlined portion was specific to this pilot intervention study. The subsequent literature review

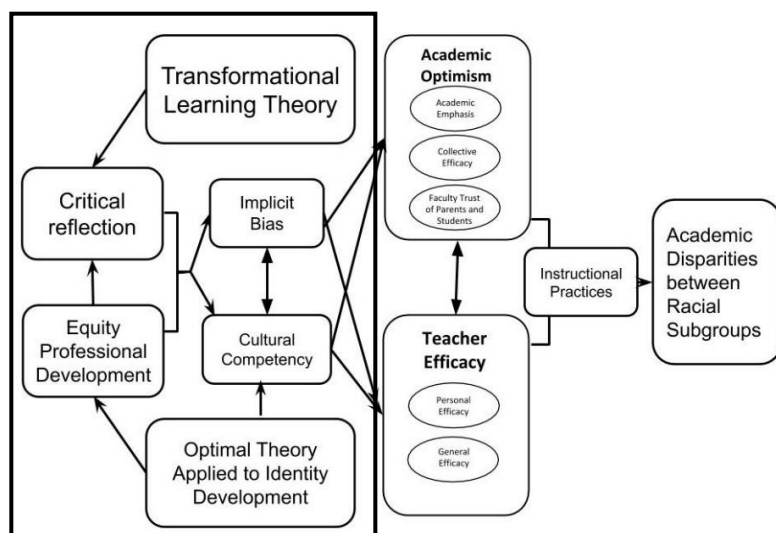


Figure 5.6 Conceptual framework

focused these theories and concepts towards an intervention framework proposed to capture the intent and outcomes of this study (Figure 5.6). Specifically, the intervention framework focused on the application of the conceptual to specific activities and their hypothesized effects leading to proximal and distal outcomes. The factors outlined in the figure speak to the process TFES participants would encounter, and internalized behaviors that may change, as they engaged in the intervention activities. For example, by participating in equity-focused professional development, critical reflection would ensue regarding implicit biases as an underlying factor

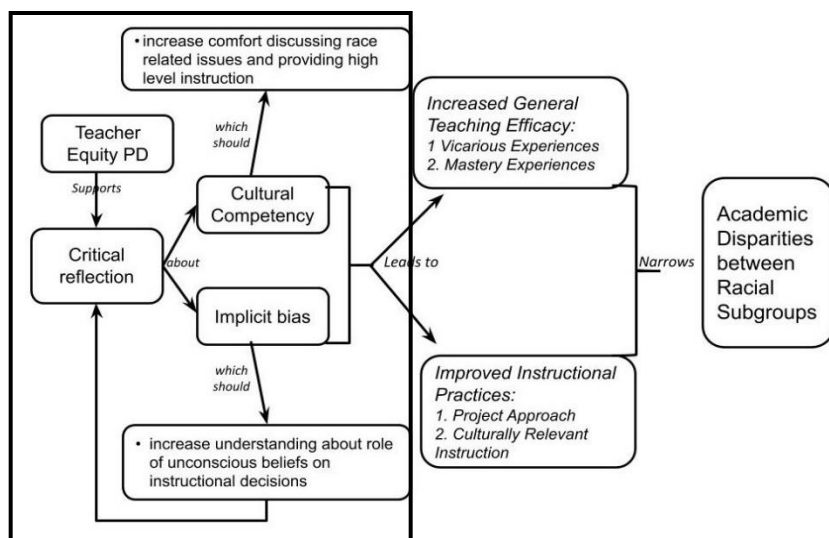


Figure 5.7 Intervention framework

impacting cultural competency. As a result of those critical reflections, TFES faculty's internalized perceptions would be challenged and result in an increased understanding of bias and comfort discussing race-related issues. However, the findings from this study indicate that the process for TFES participants did not follow that linear logic. After discussing this study's outcomes, and how they extended or departed from the literature, a refined framework is presented.

### Overall: Participants' Cultural Competence and Levels of Critical Reflection Increased

Research question one was purely qualitative and centered on how participants critical reflection approach-levels change over time. Hsieh and Shannon's (2005) directed content analysis was used to analyze participants' journal entries using Gorski and Dalton's (2019) critical reflection typology as an existing theory. While the typology was developed to categorize critical reflection activities in multicultural education and social justice coursework at the post-secondary level, this researcher used it to both develop prompts for TFES faculty's race-reflective journal entries and as a basis to analyze the approach-level of the responses provided by participants' volunteering to submit their journal entries as part of the intervention study.

The use of a critical reflection approach-level typology in this pilot study to analyze participant responses extends Gorski and Dalton's (2019) typology from a prompt-development tool to a prompt-response analysis tool. Hsieh and Shannon (2005) noted that directed content analysis offers options to refine, extend, and enrich existing theory. In the case of Gorski and Dalton's (2019) critical reflection typology, the qualitative analysis of TFES journal participants provides insights that the level of prompt does not ensure corresponding responses at conservative, liberal, or critical approach-levels. While the TFES journal entries, as a whole, illustrated growth over the course of the intervention, many individual entries waxed and waned from one session to the next. Yet, without *critical* reflection levels of prompting, participants may not have had the framing (Gorski & Dalton, 2019) necessary to truly grapple with ideas of equity, identity, oppression, and social justice to challenge their own assumptions and, potentially, move towards transformational changes in their beliefs (Mezirow, 1997; 1998).

Quantitatively reported changes in TFES participants' cultural competency as a result of critical reflection journaling immediately after engaging in equity and identity-focused professional learning were measured by Sevig, Highlen, and Adams (2000) SII through pre- and post-intervention surveys. To the researcher's knowledge, the SII had not been used to measure pre-post intervention stages of identity and so builds upon Sevig, Highlen, and Adams (2000) established use of understanding one's own identity profile to work with multiculturally diverse others or, in clinical settings, for psychologists to determine identity-focused goals and reflections for their clients. Other researchers have used the SII to determine the levels of identity development as a percent of variance in other constructs (JohnBull, 2012; Munley, Lidderdale, Thiagarajan, & Null, 2004) but not as an intervention measurement.

Each of the presented quantitatively paired analyses found that Tree Frog Elementary faculty increased their reported levels of cultural competency (RQ2). Disaggregating the data by those who volunteered to share their journals and those who did not, provided nuance to these findings. While all faculty attended the intervention that included critical reflection using race-reflective journals, those that shared their journals appeared to have had more positive change between their pre- and post-survey responses. These findings presented the most clearly increased change in their reported levels of cultural competency. What is unknown is why there was a difference between those who volunteered to share their journals and those who did not. Either group's responses (pre or post) may have been the result of social desirability bias (Grimm, 2010). Alternately, as volunteers, journal participants may have felt motivation through *identified regulation*, where the purpose of the study aligned to personally identified goals and values (Güntert et al., 2016).

### **Growth within Stages and Approaches: An Unexpected Finding**

To better understand the quantitative findings, the journal entries of a stratified, purposeful, sample of the journal participants' group were analyzed. Initial findings indicated that, overall, the levels of cultural competency found in journal entries did *not* increase but clustered around the Immersion stage of the OTAID model. Mixed method analyses provided more breadth and depth to both the survey and journal cultural competency data and indicated that the critical reflection journal entries may have been a means for participants to work through new learning (averaging at the Immersion level). As participants challenged their frames of reference (Mezirow, 1997), some of this learning was reflected in overall statistically significant findings at the Immersion, Internalization, and Integration stages for the journal participants' subgroup. However, even with participants, such as Mesu, whose pre-post data did not indicate

reported cultural competency increases, her journal provides evidence of increased identity development within the interpersonal level. Again, this researcher must consider if this is a result of social desirability bias (Grimm, 2010) for those knowing their journals would be reviewed. While possible, it is equally probable that the TFES faculty (all participants or even just the subgroup of staff that voluntarily submitted journals) believed in the equity work their new school was founded upon and thus were connected to the study's vision of improving cultural competency by reducing implicit bias (Güntert et al., 2016).

The findings from this school-wide, pilot study, intervention illustrates the complicated, and integrated, nature of transformational learning (Mezirow, 1997) and identity development (Myers et al., 1991). Unlike the intended, if-then, intervention conceptual framework (see Figure 5.7), cultural competency growth is complicated within all the learned biases and lived experiences of an individual. As seen in the qualitative and mixed method findings of research question two, inter-stage growth tends to occur before another stage of awareness emerges. Inter-level ruminations were also seen within the critical reflection findings of research question one. Thus, a refined intervention conceptual framework is presented to illustrate a more accurate growth cycle as visualized by the researcher (Figure 5.8).

The background of this framework is multidimensional and indicative of an individual's frames of reference (Mezirow, 1997) based on their background and other familial and cultural norms. From these experiences, people find multiple entry points into transformational learning indicated by the tangled cycle of professional development, critical reflection, and increasing cultural competency. These actions surround our assumptions of beliefs<sup>19</sup> and may be interrupted by the twists implicit bias interjects into the process of transforming those beliefs. These

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<sup>19</sup> Mezirow (1997) discussed assumptions of ideas and of the self that can be changed through critical reflection as a part of his adult transformational learning theory. The researcher's framework uses assumptions *of beliefs* to focus in

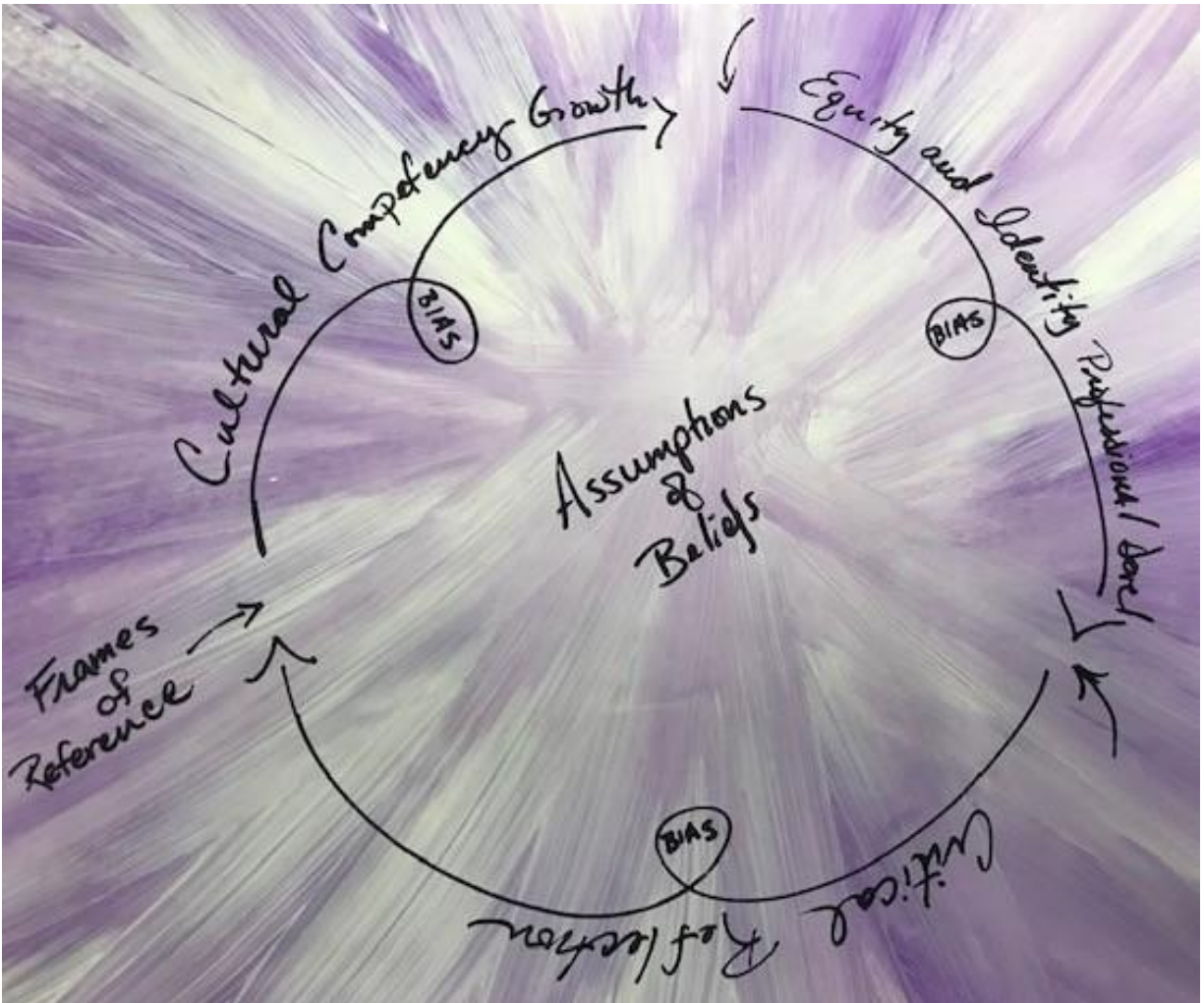


Figure 5.8. Transformational learning and identity development intervention conceptual framework.

interruptions may cause an individual to spin in the comfort of unconscious views counter to their intended growth before rejoining actions towards increased identity development. Finally, the cyclical nature of identity development exemplifies the never ending nature of one's cultural competency journey.

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on those characteristics of identity development individuals illustrate within the stages of Myers and colleagues (1991) OTAID model. An assumption of beliefs example would be the concept of meritocracy. Some believe that anyone can advance in American society simply by doing the hard work versus being born into wealth or social class. Within the framework, someone with this belief may enter the cycle of transformational learning through professional development on history of redlining (discussed in chapter one). Critically reflecting on this new knowledge may result in an understanding that not all benefit from the belief of anyone can succeed and their cultural competence increases as a result.

This conceptual framework underscores an understanding that cultural competence growth is a continual process of critical reflection, learning, questioning, regressing, and progressing in a variety of ways towards a myriad of identities. For example, where an individual may find growth in their competence towards the racial identities of others, they may still struggle with gender identity. Myers and colleagues (1991) noted that the OTAID addresses identities holistically, with each facet of an individual an important aspect of their true self. As we understand the interrelated nature of our varied identities, we become more accepting of each and thus more accepting of others (Myers et al., 1991). This expansion of one's identity development described by Myers and colleagues (1991) moves from a, "rather segmented way of viewing the world to a more holistic worldview" (p. 59). In this way, I may acknowledge and accept my identity as a female before I fully integrate what it means for me to be White. Others, however, may understand their racial identity before their sexual identity, and so on. The *transformational learning and identity development intervention framework* (Figure 5.8) visually describes the differences individuals may experience in their personal growth. For the TFES faculty, the framework captures the amorphous, yet positive, identity development progress found within participants' journal entries and pre-post intervention survey findings.

### **Cultural Competency Growth Requires Varied Professional Learning**

Van Teijlingen and Hundley (2001) noted that the purpose of a pilot study is to determine the feasibility of a larger, confirmatory trial. This quasi-experimental pilot study sought to determine if TFES staff's cultural competency would increase after participation in professional development that included critical reflection using race-reflective journals. Additionally, the compilation of equity- and identity-focused professional development activities for the purpose of decreasing implicit bias and thus increasing cultural competency, were stand-alone and not



found to be combined as in this intervention study. For example, micro-interventions (Sue et al., 2019) were not found with implicit bias and empathy interventions (Jacoby-Senhor et al., 2016) or explicitly combined with critical reflection (Liu, 2015).

Intervention content was selected based on the context of the school's community and the background knowledge of the TFES faculty. As described in this intervention study, Tree Frog Elementary opened with a focus on equity embedded into hiring practices, faculty relationship building, and first year professional learning activities. Thus, all staff were prepared to continue equity- and identity-focused professional learning as presented in this dissertation. In fact, the most positive aspect of this study was the full engagement of TFES faculty members on their individual and collective journeys to understand themselves and better support their students.

### **Limitations**

Several limitations were present in this study including those related to positionality, pilot studies, sample size, the Dissonance items within the condensed SII survey instrument, and timing of both the intervention activities and observing the length of journaling by TFES faculty. As principal and researcher, I have a positional authority over the participants of this study, regardless of how carefully I check my biases and how often I reiterate to TFES that they have choice in participating in surveys or sharing journal entries. These potential biases and influence were consistently checked with the researcher's advisor and through consistent reiteration of the options TFES staff had to determine their participation or lack thereof. Additionally, the researcher kept field notes and a principal journal to triangulate qualitative findings and ensure that they were couched in reality, and not overly positive remembrances biased to the relationship between the researcher and the TFES faculty.

Lee and colleagues (2014) noted that pilot studies must be noted as a limitation in that they are determining the feasibility of a confirmatory study. Pilot studies work through the limitations of smaller sample sizes and, as a result, employ larger levels of statistical significance such as .10 for this intervention. This allowance posits a greater possibility of a Type I error (McLeod, 2019) yet also ensures that a type II error (McLeod, 2019) does not overlook the viability of the proposed intervention in a larger context.

Dissonance stage analyses indicated discrepancies in the reliability of item five in the SII survey provided to TFES faculty (Appendix K). While the original SII survey had 11 items to capture participants reported Dissonance beliefs (Sevig, Highlen, & Adams, 2000), the condensed survey used in this study employed three items. Utilizing Cronbach's Alpha, Dissonance had the lowest alpha level for the condensed survey (.58 or poor, see Appendix J) and the study sample size needed to be much larger (into the hundreds) with normally distributed data to complete factor analyses or confirmatory factor analyses (Wolf, Harrington, Clark, & Miller, 2013). Future confirmatory studies should employ cognitive interviews regarding all survey items and potentially swap item five for another Dissonance item in a future study utilizing a condensed SII survey.

Finally, the process evaluation findings revealed that additional discussion time was needed when preparing equity- and identity-focused intervention sessions; replication of this study should allot 1.5 hours instead of one per session to honor the potential for participant dialogue. Additionally, holding sessions via Zoom (n.d) did not allow the researcher to observe the amount of time participants journaled with fidelity. There may have been some TFES faculty that journaled a shorter or longer time than captured in the dosage and participant responsiveness constructs.

## Implications for Future Research

Implementation of this pilot research in other contexts is needed to determine generalizability of its positive impacts on school staff and longer term impacts on student achievement. Lee and colleagues (2014) note. “The aim of a pilot study, therefore, is to inform both the decision whether to conduct a confirmatory study and the design of the larger confirmatory trial” (p. 2). The final data set for this study was 45 matched pre-post survey pairs and 26 participant journals. Larger studies in single schools or school districts would provide findings to determine additional adjustments to the study design and implementation across varied demographic and geographic contexts.

*The Typology of Approaches to Reflection in Multicultural and Social Justice Teacher Education* by Gorski and Dalton (2019) was initially selected by the researcher for development of critical reflection prompts and *a priori* themes for each intervention session of this pilot study. The themes supported use of directed content analysis (Hsieh & Shannon, 2005) to extend Gorski and Dalton’s (2019) typology and determine if it supported the resultant responses by journal participants. However, the researcher found that additional operationalization of the prompt typology was necessary to support effective analyses of the *responses*. What emerged was a combined prompt-response typology (Table 5.1) of Gorski and Dalton’s (2019) critical reflection prompt approach-levels and corresponding response characteristics. While the original typology presented approaches to teacher education assignments, and characteristics of the requirements asked within those prompts (Gorski & Dalton, 2019), the developed typology of critical reflection responses provides a companion to fully explore the intent and result of a proposed critical reflection activity. Additional investigation of these typologies—individually and combined—will develop and/or further extend their validity (Creswell & Miller, 2000).

Design improvements include cognitive interviews on current and adjusted verbiage of items within the SII. For example, item analysis of respondents pre and post SII data revealed that the fifth survey item, measuring Dissonance, may not have been clearly understood by respondents. While the SII was validated by Sevig, Highlen, and Adams (2000), reducing the number of items within a OTAID construct may have highlighted unreliable items. Further research to validate a truncated survey, including focus groups and cognitive interviews resulting in possible revision of SII items, is recommended.

This study also underscored the importance of mixed method research designs in illustrating the clearest picture of participant change after engaging in an intervention. Figure 5.8 illuminated how one form of analysis—quantitative or qualitative—may inaccurately find a participant as having more or less levels of change than when triangulated through mixed method analyses (Creswell et al., 2006). Olive’s journals, for example, would have indicated lower stages of identity development and missed the growth found between her pre- and post-intervention surveys. Conversely, Mesu’s quantitative change seemed to show a decrease from anticipated post-intervention results, however, her journal entries described increases in her *own* identity development. These insights are the heart of a mixed methodology which should be utilized in any future confirmatory study.

### **Implications for Practice**

The relevant literature and empirical research that informed this study extended this researcher’s understanding that it is by regulating our bias, reducing oppression, and increasing our cultural competence that the collective efficacy and instructional practices within schools (Jacoby-Senghor et al., 2016;) truly improves to ensure educational equity for each and every student (Ladson-Billings, 2000; Mayfield & Garrison-Wade, 2015). Providing intervention

sessions focused on identity and implicit biases that culminated in critical reflection, were shown by the SII to have positive results on participants' reported levels of cultural competency. This improved focus on one's identity and their subsequent interactions with others should improve teacher efficacy (JohnBull, 2012) and lead to implementation of culturally responsive instruction (Bottiani, 2018) which may narrow academic disparities between racialized student subgroups. A confirmatory study within a large district, with similar results, could potentially have a positive impact on hundreds of school administrators, thousands of teachers, and tens of thousands of students. However, it is important to note the researcher's relationship with the TFES staff made this study possible without having to establish mutual trust. Trust-eliciting activities that develop connections between participants and presenters would be necessary at the start of a larger study to ensure similar engagement in the professional learning exhibited by the TFES faculty in this pilot study.

Trust became a point of reflection for the researcher as she analyzed and interpreted the feelings and stories shared within participants' volunteered journal entries. To protect her faculty's trust, the researcher found herself initially holding back on the deep analyses necessary for fear of communicating judgement of each individual's journey into racial equity and identity development. Over time, this researcher realized that the most respectful findings would authentically communicate the journey of each participant and that this process begins by accepting the trust provided through their act of volunteering. Other new qualitative researchers are encouraged that their hesitation is a sign of care and to use credibility, triangulation, and peer review strategies (Creswell & Miller, 2000; Miles, Huberman, & Saldana, 2014) to ensure that the ultimate product reflects an unbiased view supported by the data.

The role of the researcher also included her unique positionality as principal of TFES and previous experiences with TFES faculty. As a result of this history, the focus on implicit bias and cultural competency was possible through race-reflective journaling that served as both an intervention strategy and qualitative measure. Principal leadership has been found to make a difference not only in teacher efficacy and student outcomes, but in the general feel of a building (McGuigan & Hoy, 2006). Šarić and Šteh (2017) note the importance of an environment where taking risks, including personal ones about implicit and explicit beliefs, is an accepted norm to facilitate effective critical reflection and transformational learning processes. It is the sincere belief of the researcher, based on teacher working conditions data (NC TWC, 2020), informal surveys, and teacher turnover<sup>20</sup>, that TFES reflected the climate and culture necessary for an intensive intervention, such as critical reflection, to be successful without fear of coercion or judgment (McGuigan & Hoy, 2006; Šarić & Šteh, 2017). It would be crucial for other contexts to similarly develop their collective trust by implementing equity and identity work slowly and with a focus on the specific needs and interests of participants. Finally, events such as the 2020 Election and Black Lives Matter protests can elicit strong emotions that may hinder, or accelerate, participant growth. Presenters should allow participants to make connections between these events and session content when engaging in equity and identity-focused interventions.

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<sup>20</sup> At the end of its first year, TFES TWC data indicated greater than 95% of staff felt comfortable raising issues of concern and felt supported by school administration. As noted in chapter four, first year (2020) teacher turnover consisted of two teachers moving out of state. Second year (2021) was slightly higher due to the pandemic with a total of seven staff leaving (8%); one retired, four moved out of state, one resigned to stay home due to the pandemic, and one left teaching for a fully remote position.

## **Final Thoughts**

The following quote was written by journal participant Kk in their session two critical reflection prompt on oppression and implicit bias. It provides a poetic conclusion to this study and a call for future work:

The system of racism steered by the mechanisms of implicit bias acts as a fertilizer for oppression, keeping white privilege blooming and afloat in our society. Our societal garden can never be truly beautiful if it is overgrown with this dreadful, ugly, flower growing like a poisonous weed amongst the beautiful flowers of equity, racial justice and upward mobility. The oceans of social justice that surround our land will continue to be polluted by the hatred and vitriol of politics if we don't acknowledge where we have lost our way as individuals and as a country. The ebb and flow of this persistent tide can hug and smooth our shores, or it can come crashing down on our coastlines, destroying what civility remains. It starts at home by becoming an active disruptor of oppression and actively working to change the narrative that so many have been blinded by. We must use our voices, our influence, and our vote to reverse the damage that has been done to people in the country that I love.

To extend this TFES staff member's analogy, when considering the important work of closing academic disparities between racial subgroups, the cultural competence of adults providing student instruction drives the currents found within the "oceans of social justice." When those currents fill with lower levels of cultural competency, they may become unknowingly dangerous, using bias and privilege to sweep educational opportunity away. Only by regulating our bias, reducing oppression, and increasing our cultural competence will our collective current bring calm seas and the hope for sunny skies to ensure educational equity for each and every student.

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## Appendix A

### Stages from Optimal Theory Applied to Identity Development (OTAID)

Stage	Description
1 - Individuation	People experience separateness but feel a connection to societal conventions and may not question how much they have been shaped by society. Consequently, they are more likely to ascribe to group stereotypes and identify with mainstream culture.
2 - Dissonance	People begin to experience a feeling of alienation from mainstream society, often as a result of vicarious or direct discrimination and exclusion.
3 - Immersion	Feelings of pride and a sense of belonging can occur when people identify with their subculture group (or part of their identity they have previously devalued and not explored). Negative feelings about the dominant culture may be present, as well as negative feelings toward other subcultures or members of their own group who do not share similar perceptions of oppression.
4 - Internalization	People positively integrate their subgroup identity into their self-concept. People are more tolerant and accepting of others, because those who are different no longer threaten their newfound sense of self and because they are starting to understand the nature of oppression more fully.
5 - Integration	People recognize that the American social structure creates and perpetuates oppression, thus people in this phase exhibit greater unconditional positive regard for themselves, others, and all of life. Differences among all people are recognized and embraced.
6 - Transformation	People encounter a transformation by experiencing spiritual-material unity and a conscious recognition of the interrelatedness of life, so self is defined even more holistically.

*Note:* Adapted from Sevig, Highlen, and Adams (2000) p. 170-171.

## Appendix B

### Principal Interview Schedule

Items with an asterisk (\*) were adapted from Brown, Benkovitz, Muttillio, and Urban's (2011) qualitative interview schedule. [brackets] refer to language additions.

1. Describe your school. What makes it unique?
2. What are the demographics of students within your school this year (if not shared in the description)?
3. Do you know if your demographics will change after students are reassigned to the new school?
4. Can you describe for me your school-wide goals and what they look like in practice?  
What do you hope these goals will do for your school community?
5. \*How do you define excellence for teachers and students; what are your, "look-fors"?  
Describe for me the ways in which you communicate these ideals throughout your community?
6. Describe the ways your school is working to meet the needs of diverse learners.
7. \*How do you recruit, retain, and support good teachers?
8. \*How do you determine the professional development provided to teachers?
9. \*Do you ever discuss issues of race, class, and/or diversity with the teachers, parents, students, and/or community members? Why/why not? How?
10. \*[How] are parents/families involved in your school?
11. \*Is the community involved? Why/why not? How?
12. \*What are some of the major challenges facing your school community and how do you go about addressing them?
13. \*How are resource allocation decisions made at (name of school)?
14. \*[How] do you use data [at name of school]?

## Appendix C

### Teacher Beliefs on Instruction and Learning Survey

*Note: The first column containing subscale information will not be included in the deployed survey; additionally, all items will be randomized except for demographic information. In order to access the survey, teachers will need to clear through an “I agree” after reading the following statement: “By completing this survey or questionnaire, you are consenting to be in this research study. Your participation is voluntary, and you can stop at any time.”*

The following survey will support an understanding of your beliefs around instruction and learning at your school. Please indicate your opinions about each of the statements below by selecting the appropriate number. Demographic information is for analysis purposes only and, at no time, is your name requested or captured in the survey process to keep your responses anonymous. Thank you for your support!

Demographics. Please complete the following by writing or selecting the appropriate response:

**School:** \_\_\_\_\_

**Current teaching position:** K 1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup> 4<sup>th</sup> 5<sup>th</sup> Special Ed. Specialist/Special Areas

**Class size:** \_\_\_\_\_

**Number of years teaching:** \_\_\_\_\_

**Race:** African American Hispanic Asian White Multi Prefer not to say

**Gender:** Female Male

Please indicate the degree to which you agree or disagree with each statement by circling the appropriate numeral to the right of each statement.

1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, 6 = strongly agree

Teacher Efficacy Scale – Personal and General (Dembo & Gibson, 1985)		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
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PTE 1.	When a student does better than usual, many times it is because I exerted a little extra effort.	1	2	3	4	5	6
GTE Reverse code 2.	The hours in my class have little influence on students compared to the influence of their home environment.	1	2	3	4	5	6
GTE 3.	The amount that a student can learn is primarily related to family background.	1	2	3	4	5	6
PTE 4.	When a student is having difficulty with an assignment, I am usually able to adjust to his her level.	1	2	3	4	5	6
GTE Reverse code 5.	If students aren't disciplined at home, they aren't likely to accept any discipline.	1	2	3	4	5	6
PTE 6.	When I really try, I can get through to most difficult students.	1	2	3	4	5	6
GTE Reverse code 7.	A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on her/his achievement.	1	2	3	4	5	6
PTE 8.	When the grades of my students improve it is usually because I found more effective teaching approaches.	1	2	3	4	5	6
PTE 9.	If a student masters a new concept quickly, this might be because I knew the necessary steps in teaching that concept.	1	2	3	4	5	6
GTE 10.	If parents would do more with their children, I could do more.	1	2	3	4	5	6
PTE 11.	If a student did not remember information I gave in a previous lesson, I would know how to increase his/her retention in the next lesson.	1	2	3	4	5	6
PTE 12.	If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him quickly.	1	2	3	4	5	6
GTE 13.	The influences of a student's home experiences can be overcome by good teaching.	1	2	3	4	5	6
GTE Reverse code 14	Even a teacher with good teaching abilities may not reach many students.	1	2	3	4	5	6

Academic Emphasis Scale (Goddard & Sweetland, 2000)		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
<b>AE 15.</b>	Students respect others who get good grades	1	2	3	4	5	6
<b>AE 16.</b>	Students try hard to improve on previous work	1	2	3	4	5	6
<b>AE 17.</b>	Teachers in this school believe that their students have the ability to achieve academically	1	2	3	4	5	6
<b>AE – reverse code 18.</b>	Students neglect to complete homework	1	2	3	4	5	6
<b>AE 19.</b>	Students make provisions to acquire extra help from teachers	1	2	3	4	5	6
<b>AE 20.</b>	Academically oriented students are not ridiculed by their peers	1	2	3	4	5	6
Omnibus Trust Scale: Trust in Clients subscale (Hoy, Gage, & Tarter, 2006)		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
<b>T-Scale 21.</b>	Teachers in this school trust their students	1	2	3	4	5	6
<b>T-Scale 22.</b>	Students in this school can be counted on to do their work	1	2	3	4	5	6
<b>T-Scale 23.</b>	Students in this school care about each other	1	2	3	4	5	6
<b>T-Scale 24.</b>	Teachers here believe that students are competent learners	1	2	3	4	5	6
<b>T-Scale 25.</b>	Teachers can count on parental support	1	2	3	4	5	6
<b>T-Scale 26.</b>	Teachers in this school believe what parents tell them	1	2	3	4	5	6
<b>T-Scale 27.</b>	Parents in this school are reliable in their commitments	1	2	3	4	5	6

Collective Efficacy (Goddard, Hoy, Woolfolk Hoy, 2000)		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
CE 28.	If a child doesn't learn something the first-time teachers will try another way	1	2	3	4	5	6
CE 29.	Teachers in this school are skilled in various methods of teaching	1	2	3	4	5	6
CE 30.	Teachers in this school really believe every child can learn	1	2	3	4	5	6
CE 31.	If a child doesn't want to learn teachers here give up	1	2	3	4	5	6
CE 32.	Teachers here fail to reach some students because of poor teaching methods	1	2	3	4	5	6
CE 33.	Teachers here don't have the skills needed to produce meaningful student learning	1	2	3	4	5	6
CE 34.	Teachers in this school are able to get through to difficult students	1	2	3	4	5	6
CE 35.	Teachers here are confident they will be able to motivate their students	1	2	3	4	5	6
CE 36.	Teachers in this school think there are some students that no one can reach	1	2	3	4	5	6
CE 37.	Homelife provides so many advantages they are bound to learn	1	2	3	4	5	6
CE 38.	These students come to school ready to learn	1	2	3	4	5	6
CE 39.	The opportunities in this community help ensure that these students will learn	1	2	3	4	5	6
CE 40.	Students here just aren't motivated to learn	1	2	3	4	5	6
CE 41.	Teachers here need more training to know how to deal with these students	1	2	3	4	5	6
Self-identity inventory (Sevig, Highlen, & Adams, 2000)		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

CC 42.	I am who I am, so I don't think much about my identity.	1	2	3	4	5	6
CC 43.	Sometimes I get tired of people complaining about racism.	1	2	3	4	5	6
CC 44.	I believe there is justice for all in the United States of America.	1	2	3	4	5	6
CC 45.	I am starting to feel angry about discrimination in this country.	1	2	3	4	5	6
CC 46.	I am just beginning to see that society doesn't value people who are "different."	1	2	3	4	5	6
CC 47.	I understand that everyone is expected to follow the same rules even if they don't seem to be right for everyone.	1	2	3	4	5	6
CC 48.	My identity as a member of my group is the most important part of who I am.	1	2	3	4	5	6
CC 49.	Being with people from my group helps me feel better about myself.	1	2	3	4	5	6
CC 50.	I focus most of my time and efforts on issues facing my group.	1	2	3	4	5	6
CC 51.	I recently realized that I don't have to like every person in my group.	1	2	3	4	5	6
CC 52.	My oppressed identity does not primarily define who I am as it did in the past.	1	2	3	4	5	6
CC 53.	I have <i>recently</i> seen the depth to which oppression affects many groups.	1	2	3	4	5	6
CC 54.	People in the U.S.A. have been socialized to be oppressive.	1	2	3	4	5	6
CC 55.	I would be happy if a member of my family were openly gay/lesbian/bisexual, regardless of my sexual orientation.	1	2	3	4	5	6
CC 56.	I would have as a life partner a person of a different race.	1	2	3	4	5	6

## Appendix D

### Needs Assessment Qualitative Coding

	<b>A Priori themes (construct-derived) of each principal's perceptions of their school</b>		
<b>Inductive (Codes) and evidences within each a priori theme</b>	<b>Cultural Competency (deductive coding)</b>	<b>Faculty Trust in Parents and Students</b>	<b>Academic Emphasis</b>
<b>School A</b>	<p><b>(Institutional)</b> Social justice will eliminate the predictability of achievement on the basis of race and economics and other factors</p> <p>our instruction, the first time, is aligned to our standards and is accessible for all kids. <b>(Interpersonal)</b></p> <p>That our achievement data at our school and to some degree our discipline data reflects that we do not provide equity of opportunity at our school. <b>(Personal)</b></p> <p>I talk about it (racial equity) openly in individual conversation, as I don't think that in our context we are especially successful if folk are uncomfortable or unaware talking to them about it in a whole group, especially to the degree to which they may perceive statements about racial inequity as being about them, creating a defensive mindset that leaves them less open to hearing, understanding, or changing. <b>(Interpersonal)</b></p>	<p><b>(Vision)</b> an orientation to community that helps folks from many different places feel connected to a place supporting them</p> <p>we seek to hire folk whose mindset should match the flexibility and innovation that we expect teachers to be able to do <b>(staff connection to parents)</b></p> <p>profile what we are doing about those inequities to be able to try to increase a sense of trust between folk who may be disenfranchised and the work of the school and the support of their students with the work of the school. <b>(Intentional Engagement)</b></p> <p>we have a fairly fractured community. <b>(Hinderance)</b></p> <p>because it (the school) is not representative of the community in its faculty or in its parent leadership or in its administration, does not fully understand the cultural dynamics of the community and as such, does not understand how to effectively create an invitation to the community <b>(Hinderance)</b></p>	<p><b>(Vision)</b> So annual growth for all, catch up growth for those who are behind, a learning experience that increases engagement with learning and supports inquiry</p> <p>They are enthusiastic about the ways in which they are helping kids to learn. <b>(Teacher focus)</b></p> <p>There is no teaching without learning, there is no learning without teaching. <b>(Belief)</b></p> <p>if we don't give kids the knowledge, understanding, and capacity to do that's required in our curriculum, then we don't serve them <b>(Vision)</b></p> <p>We try to talk a lot about our kids <b>(Intentionality)</b></p> <p>is around the academic work of their child that they may be most interested in or feel the best connection to. <b>(Intentionality)</b></p>



		<p><i>I strive to make every interaction with any member of our community or parent one where they feel welcomed (<b>Intentionality</b>)</i></p> <p><i>(parents) should enter into a space where there are other people who are smiling or that they are able to see very evidently that their child or the student who they are connected to is cared for very visibly in those spaces where they interact (<b>Vision of engagement</b>)</i></p>	
<b>A Priori themes (construct-derived) of each principal's perceptions of their school</b>			
Inductive (Codes) and evidences within each a priori theme	<b>Cultural Competency (deductive codes)</b>	<b>Faculty Trust in Parents and Students</b>	<b>Academic Emphasis</b>
<b>School B</b>	<p><i>I wish my teaching staff was as diverse as my student population (<b>Personal</b>)</i></p> <p><i>we don't think of them in these little boxes and in these little containers, we just think of them as [mascot]. We just take them all where they are and wanting to move them to that next level. (<b>Personal</b>)</i></p> <p><i>(I) try to reach out to places like central [North Carolina Central University – an HBCU] if we have enough notice that we're going to have a job and try to find diverse candidates. (<b>Interpersonal</b>)</i></p> <p><i>There is an angst that comes along with [speaking about</i></p>	<p><i>and particularly from some of our housing projects, so we can get some really angry moms, and some of the anger comes from them being so far away from our school. (<b>Frustration with student assignment/bussing</b>)</i></p> <p><i>not to give up on them because of that zip code. (<b>Concern</b>)</i></p> <p><i>We don't see as much with our parent engagement nights that we're doing for academics. (<b>Limited engagement</b>)</i></p> <p><i>some of our stay-at-home parents will come in during literacy time and will facilitate a station or will</i></p>	<p><i>It looks like our circumstances don't define us. Our past doesn't predict our future. It means that no matter what our label is, whether it's special ed or free and reduced lunch, what have you, that doesn't necessitate what our capability is or where we can reach or what we can do. (<b>Belief</b>)</i></p> <p><i>Academically we do so much with guided reading groups and with our own reading time, there's just so much. (<b>Strategies</b>) (referring to meeting needs of diverse learners)</i></p>

	<p>issues of diversity] because if you don't do it well you are going to offend people <b>(Personal)</b></p> <p>that these kids [historically marginalized] are only going to achieve what you feel like they can. If you treat them like they can't, they won't. <b>(Interpersonal)</b></p>	<p>monitor what's going on over here with the kids so the teachers can work in K1 and their guided reading <b>(Engagement)</b></p>	<p>"Socrates" group with them. Students of color, race and achievement together <b>(racially-focused support)</b></p>
	<b>A Priori themes (construct-derived) of each principal's perceptions of their school</b>		
Inductive <b>(Codes)</b> and evidences within each a priori theme	<b>Cultural Competency (deductive coding)</b>	<b>Faculty Trust in Parents and Students</b>	<b>Academic Emphasis</b>
<b>School C</b>	<p>So trying to really make sure as much as I can that my teaching staff reflects the diversity. <b>(Interpersonal)</b></p> <p>So our school wide goal at School C is by 2021 we'll eliminate the opportunity gaps between our highest performing group in our building and the rest of the groups in our building. <b>(Interpersonal)</b></p> <p>Our work is on seeing the inequities in our building, understanding the inequities, and then figuring out ways that we can work creatively and collaboratively to dismantle the inequities and to dismantle the systemic things that have been a huge factor in pretty much predicting that certain students in our building won't be successful. <b>(Interpersonal)</b></p> <p>I know their paper pencil tests are not representative of</p>	<p>academic parent teacher team meetings this year where they come in and they're looking at data alongside us, and how the cohort of kids are moving. Then sometimes we drill that down to the classroom level when they come in for the academic parent teacher team meetings. <b>(Intentional engagement)</b></p> <p>they all [parents of varying cultures] value what opportunities education can provide for their children. <b>(Belief and Support)</b></p>	<p>They also maintain an academic press with their learners but also have expressed concern that they also want to make sure that their students or their children are well rounded as well. <b>(High parent expectations)</b></p> <p>And we don't have the typical excuses that you would find (our parents are not involved, or they don't have technology, or they don't understand). No, they are. They're engaged. They will do whatever to make sure that their children are successful. <b>(Whole school engagement in academic expectations)</b></p> <p>academic excellence is fully understanding what they're teaching.</p>

	<p><i>what these kids can do."</i> <b>(Institutional)</b></p> <p><i>It's even opening your eyes and having a lens, how are we providing these equitable opportunities</i> <b>(Interpersonal)</b></p> <p><i>how are we doing that [supporting students based on need] beyond even with extracurricular activities? So it's definitely a paradigm shift for my teachers.</i> <b>(Interpersonal)</b></p> <p><i>what is our working definition of equity and what does that look like. And then every staff member was also asked to take the Harvard University's implicit bias test.</i> <b>(Interpersonal)</b></p> <p><i>I'm looking to see who's attending the trainings, these are going to be the people, the equity champions to help being in this work.</i> <b>(Interpersonal)</b></p> <p><i>It's a nonnegotiable, but it just helped me to see who was understanding and who was willing to carry that torch.</i> <b>(Institutional).</b></p> <p><i>At the beginning of the school year, I had that hard (equity) conversation with my entire school community during open house.</i> <b>(Interpersonal)</b></p>		<p><i>First you got to understand what you're teaching.</i> <b>(Teacher expectations)</b></p> <p><i>So I think about that academic excellence is knowing your standards and your content.</i> <b>(Teacher expectations)</b></p> <p><i>So that excellence looks like making sure you know your learners</i> <b>(Intentional instruction by student)</b></p> <p><i>When you have academic achievement data nationally in this country, and all the way at [our school] that looks like our [disparate] data for students of color, there needs to be a sense of urgency.</i> <b>(Urgency)</b></p> <p><i>Not necessarily [academics], but they [students] find that something that they're really good at, that they can do well and they have a lot of efficacy around that. That's what excellence looks like for students.</i> <b>(Honor student interests)</b></p>
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## Appendix E

### Research Study Recruitment Email

Greetings Sandpiper Staff!

As you know, I am doctoral candidate at Johns Hopkins University School of Education, and I am interested in how our implicit bias work affects cultural competency. We began our implicit bias and equity-focused professional development last year and, in that way, not much will change as a result of my study. The professional development, what we refer to as *the work*, continues.

I am writing to kindly request your participation in my dissertation research study by completing two surveys and sharing completed journal entries. The title of the study is: *Critically Reflecting on Implicit Bias and Racial Equity to Narrow Academic Disparities: A New School Intervention*. I would greatly appreciate your involvement in responding the surveys and confidentially sharing your journals.

The surveys will be electronic, and all responses will be anonymous. Your agreement to participate will be noted within a specific start page in the survey – you do not need to inform me directly. Additionally, steps will be provided to ensure complete confidentiality with all collected data, including demographic data, if you chose to complete them.

A new aspect to our full-staff required, equity-focused, professional development this year will be responding to critical reflection prompts with time provided to respond through an online journaling platform. This process will also be asked of all staff as part of the natural evolution of our professional development plan. As part of my study, I also humbly request that you participate by anonymously providing me with copies of your journal. If you choose to share these journal entries as part of my research study, they will be collected after six professional development sessions (Fall/Winter 2020).

As your principal, I understand that you may feel a sense of pressure from my request. I want to reassure you that I am taking every step to ensure that I am unaware of who chooses to participate in this study. This includes asking an outside individual, Dr. Ranjini JohnBull, to be the point person for answering questions, accepting journals, and collecting written informed consent for those journals. Dr. JohnBull's contact information is below. Anonymity and confidentiality are paramount considerations for both the surveys and journals, should you choose to participate. Additionally, if you decide not to complete the survey or share your journal, there will not be any negative effects on your evaluation or employment. Finally, discussion of our school or district, and collected data will be through the use of pseudonyms within my dissertation and any subsequent publication; the actual school name or district will not be disseminated. Results of this study will be made public upon completion and shared with the faculty of the Johns Hopkins School of Education. If you would like a copy of the results, I will be happy to share them with you.

Thank you for considering this request,  
Teresa Caswell

Contact info for Dr. Ranjini JohnBull:  
Johns Hopkins University, School of Education  
[rmjohnbull@jhu.edu](mailto:rmjohnbull@jhu.edu)

(434) 566-8460

## Appendix F

### Abbreviated Self-Identity Inventory

The following survey will support an understanding of your beliefs around your identity and the identities of others. Please indicate your opinions about each of the statements below by selecting the appropriate number. Demographic information is for analysis purposes only and, at no time, is your name requested or captured in the survey process to keep your responses anonymous. Thank you for your support!

Demographics. Please complete the following by writing or selecting the appropriate response:

**Are you a certified or non-certified staff member?**      Certified      Non-Certified

Please indicate the degree to which you agree or disagree with each statement by indicating the appropriate number:

1 = strongly disagree, 2 = disagree, 3 = slightly disagree,  
4 = slightly agree, 5 = agree, 6 = strongly agree

1. I am who I am, so I don't think much about my identity.
2. Sometimes I get tired of people complaining about racism.
3. I believe there is justice for all in the United States of America.
4. I am starting to feel angry about discrimination in this country.
5. I am just beginning to see that society doesn't value people who are "different."
6. I understand that everyone is expected to follow the same rules even if they don't seem to be right for everyone.
7. My identity as a member of my group is the most important part of who I am.
8. Being with people from my group helps me feel better about myself.
9. I focus most of my time and efforts on issues facing my group.
10. I recently realized that I don't have to like every person in my group.
11. My oppressed identity does not primarily define who I am as it did in the past.
12. I have *recently* seen the depth to which oppression affects many groups.
13. People in the U.S.A. have been socialized to be oppressive.
14. I would be happy if a member of my family were openly gay/lesbian/bisexual, regardless of my sexual orientation.
15. I would have as a life partner a person of a different race.

## Appendix G

### Intervention session video links

#### Session 2: Microaggressions and Positive Associations

##### Microaggressions

- Hidden Figures Library Scene: <https://www.youtube.com/watch?v=ID1iFaWgcIE>
- American Son Trailer (1<sup>st</sup> half) <https://www.netflix.com/title/81024100>

##### Positive Associations:

- Black Panther (Shuri) <https://www.youtube.com/watch?v=5QIQaZWaSJA>
- Independence Day <https://www.youtube.com/watch?v=92ddg-i82jg>

#### Session 3: Implicit Bias in Teachers

- Podcast and transcripts: <https://www.npr.org/transcripts/495488716>
- You Tube video: <https://www.youtube.com/watch?v=ucEAcIMkS0c>

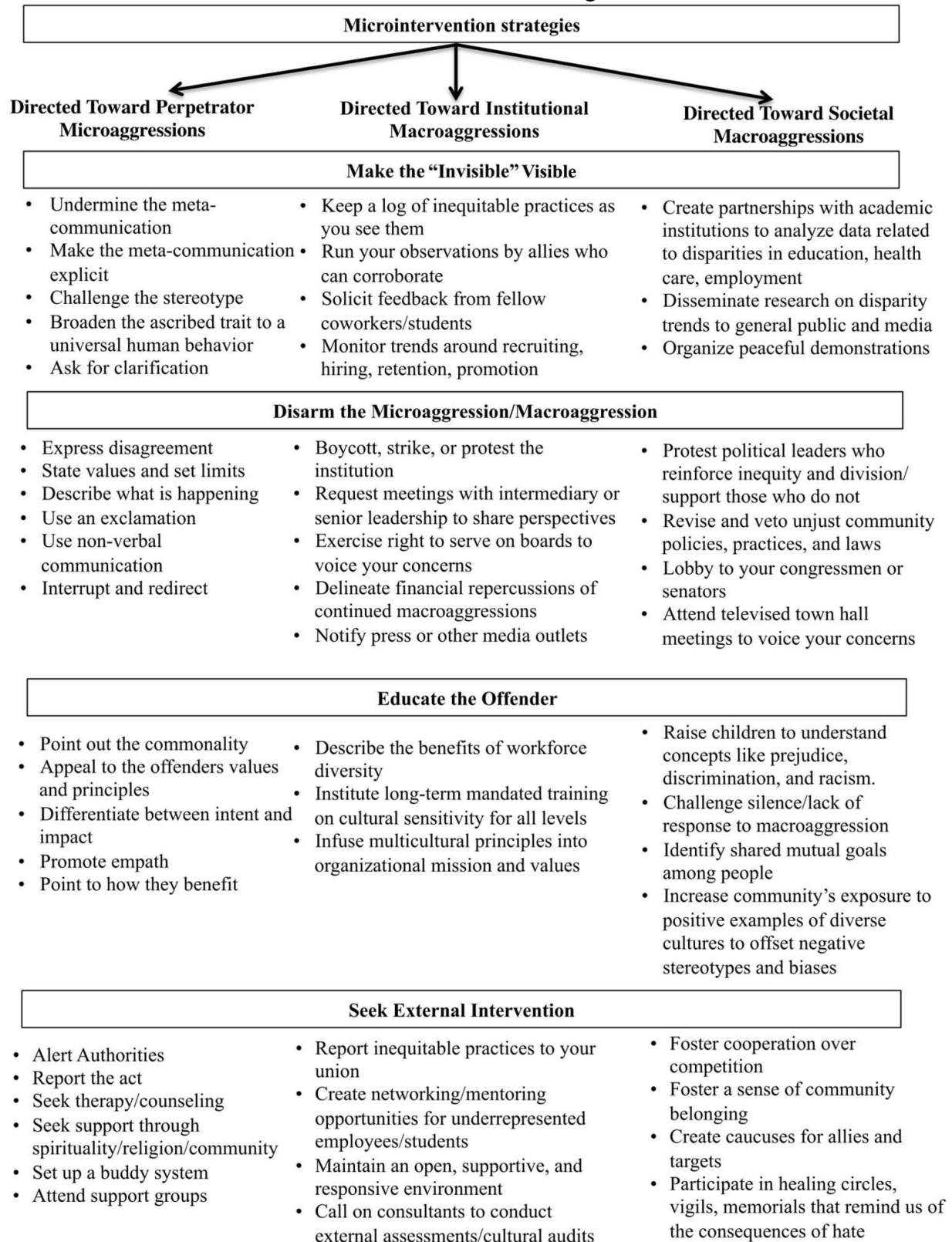
#### Session 6:

##### Implicit Bias in Children

- CNN Video: <https://www.youtube.com/watch?v=JcAuO0PNnrs>

## Appendix H

### Micro-Intervention Strategies



**Scenario 1:** *Colleague makes the following statement about a new employee with a visible disability: “He only got the job because he’s handicapped.”*

**Metacommunication:** *People with disabilities only receive opportunities through special accommodations rather than through their own capabilities or merit.*

**Scenario 2:** *Student in a chemistry class makes the following comment about an Arab American student: “Maybe she should not be learning about making bombs and stuff.”*

**Metacommunication:** *All Arab Americans are potential terrorists.*

**Scenario 3:** *African American male enters an elevator occupied by a White heterosexual couple. The woman appears anxious, moves to the other side of her partner, and clutches her purse tightly.*

**Metacommunication:** *Black men are dangerous, potentially criminals, or up to no good.*



## Appendix I

### Cognitive Interview Matrix

Potential Critical Reflection Prompt	Participant One	Participant Two	Participant Three
Reflect on implicit biases and microaggressions, what resonated with you? Do you see microaggressions in our students? In our parents? In yourself?	Bias around perceptions about student, parents, etc.	Likes first half; second half – open up to include more people – administration, etc.	Visceral reaction to the word “see” – outward behaviors come to mind... would respondents be look at behaviors (punitive)?
Reflect how your life experiences, perceptions, and education have led to your current ideas about working with diverse student populations.	Love this question! “Why” comes to mind before the how...	Are those enough? Maybe add “beliefs?”	I like this question – clear, explicit. It would be interesting to see directions respondents take this question.
Think of the students you interact with regularly; can you see where implicit biases or microaggressions may be present? By whom, towards whom, and why? If so, what would you like to do in response?	Knowledgeable enough to see it in other populations? Likes challenge of by/towards whom... maybe add under what conditions instead of why.	Maybe change to “Think of your interactions with students...”	Depending on one’s personal growth and development, respondents may struggle...
How do I situate and negotiate the students’ knowledge, experiences, expertise, and race with my own knowledge, experiences, expertise, and race?	Maybe “How do I respect...?” Negotiate = doing?	Situate and negotiate = problematic verbiage	Would respondents give the answer the researcher wants vs. what they actually feel?

If you are White, what does that mean to you, now, in this environment? If you are a person of color, what does that mean to you, now, in this environment? All – Does this description meet your ideal? Why or why not?	Great question!	Maybe change all to “Does the description you provided meet your ideal?”	The “what” was NOT clear... Maybe “how do you identify racially or ethnically...”
How do I, as a teacher, situate myself in the education of others? How do I ensure all students feel a sense of worth?	Beautiful question. Chills! Evokes service mindset and having responsibility to students	Situate is problematic – Maybe “How do you come to understand the educational experiences of others?” Loves the second part of this question!	How broad is “others?” For the 2 <sup>nd</sup> part – worth and education are not necessary the same thing (want you to feel loved but not educating you)
Do our students reflect society? Why or why not? How can you ensure that your classroom community welcomes disruption when necessary?	Feels like society as a whole	Society vs. county, etc...	Society - what is meant?  Disruption: student behavior comes to mind vs. stepping in
How do we begin to disrupt inequities or injustices in education? Do inequities exist in your classroom? If so, how and why?	Disruption is broad and admitting inequities may be problematic to respondents	I really like this question!	Not sure respondents will be honest in 2 <sup>nd</sup> part (depending on where are in equity growth)
Am I willing to speak about race on behalf of those who might not be present in the conversation? Are there spaces where I would be less likely to express injustices of race?	Clear question!	NICE! Chills – love this.	“on behalf of” is bothersome! Don’t need to speak <i>for</i> others  2 <sup>nd</sup> part is yes/no

How is our school a microcosm of society and social justice? How are you positioned in that society?	Definitions are key here	problematic terminology	Society needs to be defined Social justice needs to be defined
What does oppression mean to you? How does implicit bias contribute to that definition? What can you do about it?	Love this! Great and really tough	Maybe add marginalization to the first part	Consider changing “can” to more of an explicit action (how, could/would)
Is it important to discuss microaggressions “in the moment?” Why or why not?	Yes! Now more say versus do, maybe another prompt about doing: “Can you describe a time when you took the opportunity to respond, or a time you wish you had?”	Discussed the how and suggesting describing an opportunity...	Fairly clear; would depend on context of the microaggression event (not all can be done immediately based on power dynamics, etc.

## Appendix J

### Cronbach's Alpha

The abbreviated SII survey, 15 total items, three per construct, was tested for internal consistency, an indication of scale reliability (Gliem & Gliem, 2003; Sheng & Sheng, 2012; see Table A.1). Using a sample size of 325, and 56 items, SII authors Sevig, Highlen, and Adams (2000) reported Cronbach Alphas of Individuation (.89), Dissonance (.90), Immersion (.84), Internalization (.72), and Integration (.78), much higher scores than those seen in this intervention pilot study using an abbreviated survey.

Table A.1

#### *Cronbach's Alpha*

SII Stage	Alpha	Internal Consistency
Individuation	.61	Questionable
Dissonance	.58	Poor
Immersion	.79	Acceptable
Internalization	.68	Questionable
Integration	.66	Questionable

Sheng and Sheng (2012) noted that the limited number of respondents and non-normal distribution of survey responses may result in over or underestimates of an instruments internal consistency. Additionally, while Gliem and Gliem (2003) indicated that the number of Likert-scale items can increase Cronbach's alpha, Sheng and Sheng (2012) emphasized that the number of items is not as important as the sample size for determining accurate internal consistency with non-normal data. Considering the relatively low sample size for this pilot study, the lower coefficient alpha is not surprising and does not truly indicate lower reliability of the abbreviated SII survey instrument. However, the lowest Cronbach Alpha is seen within the Dissonance stage (.58 or poor), a stage where participant responses demonstrated questions about the reliability of item five. Beyond this pilot study, item improvements within the Dissonance subscale should be

considered to ensure greater internal consistency and scale validity in addition to a higher sample size.

## Appendix K

### Reliability of Dissonance Findings: Item Five

Initial comparisons of pre- and post-survey mean scores across the five stages of the OTAID continuum showed expected increases and decreases with the exception of the Dissonance stage, which increased in both the aggregated and disaggregated analyses (see Figure A.1). While it is possible lower levels could increase as higher stages of cultural competency increase, as one's personal identity development and growth is not strictly linear, the increase in post-survey Dissonance mean scores were surprising. Paired samples tests using the non-parametric Wilcoxon Signed Rank test indicated that the *all pairs* Dissonance construct was not statistically significant with a small effect size ( $z = -1.32, p = .18, r = .14$ ). The *journal pairs* findings also did not show statistical significance or a practical effect ( $z = -.19, p = .84, r = .03$ ). However, the *no journal pairs* Dissonance pre-post survey data were statistically significant at the pilot study confidence level of .10 with a medium effect size ( $z = -1.67, p = .09, r = .25$ ). This indicates that TFES faculty who did not volunteer their journals had higher levels of Dissonance, a lower level of the OTAID continuum, post-intervention even though other constructs showed expected improvements. The researcher looked more closely to see if the mean score and paired samples findings were a result of any discernable trend.

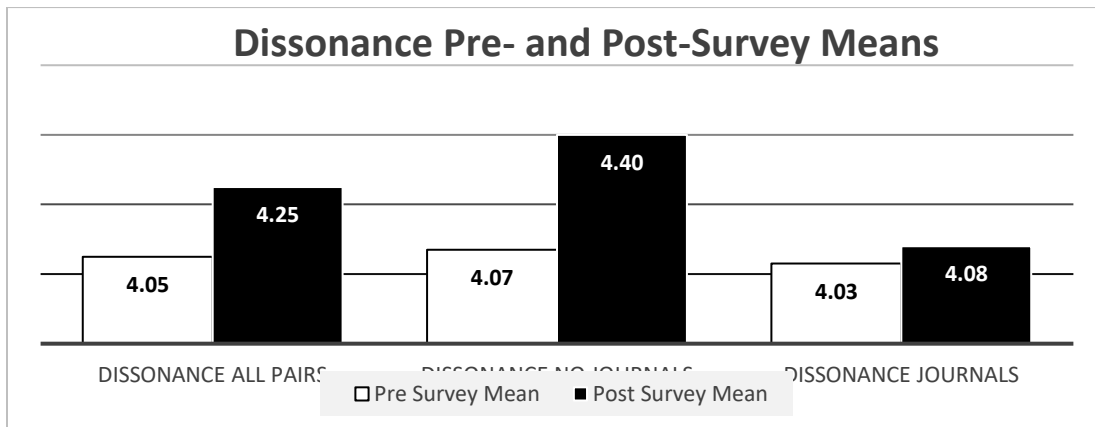


Figure A.1. Aggregated and disaggregated pre-post SII Dissonance mean differences.

An SII item analysis of post-pre Dissonance differences of 1.00 or greater (three item average for both the post- and pre-survey, subtracted to arrive at a difference). A positive difference would indicate that participants had higher rates of agreement after the intervention than before it, in opposition to the hoped-for effect within the Dissonance stage. A total of nine matched-pair participants had higher scores across the difference variable, however, as seen in Figure A.2, only one of the three questions, item five, contributing to the Dissonance variable had the most pre- to post-survey change. The 6-point Likert-scale ranged from 1 (Strongly Disagree) to 6 (Strongly Agree). Item five has eight of the nine participants with higher post-Dissonance averages reporting that they strongly disagree or disagree with the statement, *I am just beginning to see that society doesn't value people who are "different"* and, post-intervention, six of those indicate that they agree or strongly agree (at least 3-points higher). In contrast, items four and six do not seem to have resulted in the higher post-Dissonance mean.

	Item 4: I am starting to feel angry about discrimination in this country.		Item 5: I am just beginning to see that society doesn't value people who are "different."		Item 6: I understand that everyone is expected to follow the same rules even if they don't seem to be right for everyone.	
	Pre-Survey	Post-Survey	Pre-Survey	Post-Survey	Pre-Survey	Post-Survey
Participant						
6*	5	6	1	2	3	4
13*	5	5	1	4	4	5
16*	1	5	4	5	4	5
19	5	5	2	6	3	4
20	5	5	2	5	3	5
26	6	6	2	6	4	5
27	6	5	2	5	2	5
42*	6	6	1	6	6	4
45	2	5	1	5	5	3

Figure A.2. Pre-post Dissonance item analysis; \* indicated participants who also submitted journal entries.

Interpreting item five, participants moving out of the Dissonance stage would report beliefs indicating that they know society, as a whole, does not value the differences between individuals or groups, and thus would disagree with the statement. The strong levels of post-

intervention agreement seen in Figure A.2 may indicate that these participants did not think carefully about the question before the intervention and, post-intervention, felt strongly that they were now seeing that *society doesn't value people who are 'different.'* This would show that participants were gaining understanding to eventually lessen their ideological affiliation with the beliefs referenced in the SII Dissonance items. Alternately, participants may not have focused on the *just beginning to* aspect of item five and so the pre- or post-survey response is not accurate. However, other items with similar language (*starting to* in item 4 and *recently* in items 10 and 12) do not seem to have had similar disconnects pre- to post-test and JHU colleagues completed a cognitive interview of the needs assessment survey items, including these from the SII, and did not note comprehension difficulties. Importantly, the needs assessment was not presented before and after an intervention to determine if participant comprehension of item verbiage changed. As a result of these incongruities and questions, item five was removed from the Dissonance pre- and post-survey composite variables used to complete the analyses reflected in the findings.



## Appendix L

### Assumptions of Normality Findings

Assumptions testing for the paired t-test focus on the difference between each respondent's pair of survey results. Survey items, pre and post, were combined by SII stage into ten composite variables (such as pre-individualization and post-individualization). Each pre and post composite variable pair were then subtracted resulting in a difference variable (such as diff-individualization) for testing normality.

Normality assumptions for the paired t-test include a normally distributed skewness and kurtosis (between +/- 1.00) and no statistically significant difference as measured by the Shapiro-Wilk test. The researcher also, through the *descriptives: explore* function of SPSS, requested a histogram and boxplot outliers for each difference variable by pair combinations. For those SII stage variables violating normality (see Table A.2), the boxplot with outliers was used to determine if the distribution was symmetrical. Symmetry, or the distribution of differences above and below is similarly shaped, is a pre-requisite for the Wilcoxon Signed Rank test, the non-parametric version of the t-test (Field, 2013). Where both a normal distribution and symmetry cannot be established, even after removing outliers, a Sign test can be used to test pre- and post-survey paired change over time.

Table A.2

*Assumptions testing results by pairing and SII stage*

	Skewness	Kurtosis	Shapiro- Wilk	Symmetry	Indicated Outliers	Resulting Test
<b>All Pairs (n=45)</b>						
Individuation	-.29	-0.51	.14	n/a		Paired t-test
Dissonance	-1.41	5.04	.00**	Yes	9, 16, 41	Wilcoxon- Sign
Immersion	.87	1.87	.00**	No	11, 29, 33, 34	Sign
Internalization	-.49	1.96	.03**	Yes	9, 41	Wilcoxon- Sign
Integration	-.17	-.12	.16	n/a		Paired t-test
<b>No Journal Pairs (n=23)</b>						
Individuation	.19	-.58	.51	n/a		Paired t-test
Dissonance	.68	1.28	.09	No	8, 12	Sign
Immersion	-1.02	.86	.01**	Yes	6, 16, 17	Wilcoxon- Sign
Internalization	-.28	-.48	.32	n/a		Paired t-test
Integration	-.20	-.83	.13	n/a		Paired t-test
<b>Journal Pairs (n=22)</b>						
Individuation	.28	-.64	.30	n/a		Paired t-test
Dissonance	-1.03	2.62	.02**	Yes	4	Wilcoxon- Sign
Immersion	.84	.79	.08	n/a		Paired t-test
Internalization	.71	2.05	.11	Yes	4, 19	Wilcoxon- Sign
Integration	.60	.67	.33	n/a		Paired t-test

Note: \*\* statistically significant at the  $p < .05$  level

## Appendix M

### RQ1 Qualitative Coding

	Provided Critical Reflection Prompts		
Level of Response	Prompt 1:	Prompt 2:	Prompt 3:
Level 1: Stereotyping Others			
Level 2: Personal History without Connection to Others	In 11 <sup>th</sup> grade, I got a job working with students with disabilities. It changed my life. From that moment on I knew I wanted to work with kids. Luckily, college also provided many opportunities to work with diverse cultures. I was so fortunate to be able to work with low income schools, students with disabilities, etc. <b>(Level 2; general focus on diversity; Vv)</b>	The problem isn't mine I have come to realize. And while I dislike holding back, I try to spend more time focusing on the positive and how I move forward. <b>(Level 2; privilege; Ff)</b>	<p>Now, in this environment, being a white female means to some degree, that I need to shut up and listen which is never something I want to do. <b>(Level 2; privilege and power; Ff)</b></p> <p>Typically I remain with close family and friend groups so "identifiers" are not needed/used and don't necessarily play a direct role in how we function together. <b>(Level 2; privilege; li)</b></p> <p>The school environment I'm in now, I really see the support of parental involvement and its life changing because, children come to school already knowing how to read and write, they are eager to learn and they soak up so much and require less. I communicate with other friends working at a middle or high school and the parental backgrounds are different, the kids here are more in need of educators than just being their teachers, but as confidants, supporters, mentors and sometimes just being a friend. <b>(Level 2; lack of identity connection; Tt)</b></p>
Level 3: Acknowledging Others in Isolation	<p>I can be the teacher that helps others who felt different, understand that they are not alone <b>(Level 3; personal response; Aa)</b></p> <p>Growing up being labeled as part of the minority</p>	To help eradicate oppression, I think it is crucial to educate yourself. We all know that history taught to us in school is biased, but if people would read on their own or join a book club to hear other people's thoughts on topics, it	Being Black or African American is similar to being a man with no country. I claim and fight for the honor of this land while, at the same time, combat with this land for the right to purely exist in peace and with respect. Being Black,

	<p>inspired me to provide a voice to those who constantly went unheard. <b>(Level 3; personal response; Aa)</b></p> <p>It took my brother and I a minute to see how our lives would have turned out differently as adults if we were not white, despite what our childhoods may have been like and that THIS is our privilege. <b>(Level 3; personal response; Gg)</b></p> <p>It wasn't really until college that I was truly able to get to know, understand, befriend, "hang out" with people that looked different from myself. So, this equity work from a deeper conceptual understanding is rather new for me. <b>(Level 3; reflection on diversity. Ii)</b></p> <p>After one year of my experience with the diverse student population at our school, I can say that I have a better understanding of how to work with a diverse population of students, how to engage with them, listening to them more than just telling them things to do, accepting their culture norms and beliefs, seeing them as an individual, and work with them instead of just doing things for them. <b>(Level 3; reflection on diversity; Ss)</b></p> <p>I spend a lot of time thinking through the whys of things, and I believe that helps me to navigate differing personalities of students and teammates, which ultimately helps</p>	<p>would be extremely eye-opening for many. <b>(Level 3; personal response; Hh)</b></p>	<p>at this point, means almost being a blank slate with the baggage of oppression on your back. <b>(Level 3; personal identity; Aa)</b></p> <p>It is difficult to take pride in the color of my skin because I often feel like it links me to so many things I try not to be. I think in this environment, many white people are being called out on our privilege, ignorance, etc. While I fully acknowledge that I am privileged, have implicit bias, can be ignorant sometimes, I also struggle with being grouped with all white people <b>(Level 3; personal struggle; Cc)</b></p> <p>White people have the opportunity to work on other white people in specific ways. It's an incredibly unfortunate truth that many white people won't listen to people of color, but they might begin by listening to other white people. <b>(Level 3; white identity; Xx)</b></p>
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	when working with diverse student populations. Although, I don't always get it right! <b>(Level 3; diverse teaching; Yy)</b>		
Level 4: Considering how to Effect Change	<p>I believe being exposed to diversity at a young age can decrease the odds of developing stereotypes; to see people as individuals and understand that our differences are special and not a negative. <b>(Level 4; responsibility; Hh)</b></p> <p>Although I am seasoned at teaching and modeling empathy and acceptance, in recent years I have definitely moved more towards the critical need to amplify anti-racism, equality, and social justice in the work that I do. I feel very strongly that working with a diverse student population provides opportunities to advocate for students, while interrupting and breaking down the many barriers that exist. <b>(Level 4; responsibility; Ll)</b></p> <p>I quickly found that many of the students receiving Tier 3 support didn't need an intervention teacher, they needed quality core, AND teachers who believed in them. They needed teachers who didn't water down the curriculum because it was assumed they couldn't keep up or hadn't had the life experiences to connect with the texts they were reading. <b>(Level 4; positionality and responsibility; Rr)</b></p>	<p>Being made aware of oppression and implicit bias allows us to examine our own role in upholding systems of oppression and acting in a biased way toward others. <b>(Level 4; responsibility; Bb)</b></p> <p>are there structures within the school that are acting as barriers to non-white and minority members of our community? What can we do to identify and remove these barriers? <b>(Level 4; social justice in school; Bb)</b></p> <p>As an educator, I can challenge students to see and combat their own implicit biases they may have. We can discuss systemic oppression of different groups in the classroom, and why/how this oppression has come to take place. We can discuss things they can do to combat the oppression of certain groups. <b>(Level 4; plan of action; Cc)</b></p> <p>we can identify and interrupt implicit bias- in ourselves and in others. It is ongoing work and may look different from time to time. It's important that we are aware of ourselves' and also how we can interrupt this in other settings. <b>(Level 4; reflective positionality; Gg)</b></p> <p>Implicit bias needs to be confronted in a way that allows people to understand what they are, help people understand everyone has them, and have conversations about how implicit bias leads</p>	<p>Being Black sometimes means that you have to be extraordinary in order to be viewed as someone of merit. That daunting expectation can cause you to call the fight as a lost before even getting into the ring. <b>(Level 4; responsibility; Aa)</b></p> <p>I am increasingly aware of the privilege that I accrue as a result of my racial and socio-economic identity. <b>(Level 4; positionality; Bb)</b></p> <p>I identify as being black. I do not like saying African American because I know that my family's bloodline is mixed with probably everything under the sun. <b>(Level 4; positionality; Hh)</b></p> <p>This is NOT my ideal, not even close. In fact, my outlook now on our future in regards to race relations is bleak, especially in regards to the election outcome. It is important to note that this is not about Republican or Democrat, but about the potential ideals and growth we make as a country to ensure that everyone, all groups, feel included and valued. I should not live in fear every day for my Black husband and son in 2020 in the United States of America. <b>(Level 4; impact; Oo)</b></p>

		<p>to inequality. <b>(Level 4; positionality; Ii)</b></p> <p>We need to invite and expose our students to adverse group of professionals in a variety of fields. Every child deserves to see themselves and connect with the materials we utilize in our classrooms every day. <b>(Level 4; how to support; Oo)</b></p>	
<p>Level 5: Social Justice Growth and Advocacy</p>	<p>The ability to have honest and open conversations even with people with whom we might disagree, is critical for moving forward toward a more just and equal society. As an educator, it requires me to be a better listener, to not be judgmental, to know American History, and to be aware of my white privilege. I do intend to be part of a system that provides an education that is equally accessible to all of my students. <b>(Level 5; social justice transformation; Bb)</b></p> <p>I intend to not be another teacher who puts a student on a certain life "track" in elementary school. Providing equal opportunity and being an equitable teacher is so important to me and something I have realized I will have to continue working towards understanding and doing for the rest of my career. <b>(Level 5; social justice transformation; Cc)</b></p> <p>I have come to understand that the right thing to do is "Call In" rather than, "Call Out" actions, words and positions that deny social justice, yet in this current climate it has become more</p>	<p>I can continuously challenge myself to grow as a person, understand why I have implicit biases, where they came from, and what I can do to stop myself from having them. <b>(Level 5; personal development towards social justice; Cc)</b></p> <p>Implicit biases can lead to oppressive actions. In the education system, students of color are often overidentified for special education. I think this is often due to implicit biases. I think that I can help others understand oppression and implicit biases by providing facts but by also sharing my stories as well as the stories from other individuals of color....Within the school system, I think that I can also make sure that I advocate as much as possible for students of color to make sure we are doing what is right. In my everyday life, I can try to enlighten and educate others through my actions and words. <b>(Level 5; social justice development; Jj)</b></p> <p>The first thing I can do about oppression and implicit bias is to name the implicit biases that I have and be aware of how those biases can oppress others. Once I am aware of my own biases, then I can seek experiences and people</p>	<p>Understanding and acknowledging my own implicit biases, while moving forward to disrupt racism, hate and social injustices from the schoolhouse to the systems that sometimes bind us. This is hard work and never ending. <b>(Level 5; social justice transformation; Kk).</b></p>

	<p>difficult to do because people do not want to acknowledge my experience as a Black person. The denial of white supremacy in our society is real and prevalent. <b>(Level 5; social justice transformation; Kk)</b></p>	<p>that can counteract my implicit bias. This is a time of relearning and reteaching. Finally, I can become an advocate for people who are being oppressed and openly work towards equity for all people. <b>(Level 5; social justice development; Rr)</b></p> <p>I can continue to reflect on my behavior towards people that are different from me. I can learn from colleagues and friends by listening and respecting different perspectives. I can also recognize my own biases and work to eliminate them so that I am not an oppressor through my thoughts and actions. I must also be willing to have hard conversations with people. <b>(Level 5; advocacy; Uu)</b></p>	
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	Provided Critical Reflection Prompts		
Level of Response	Prompt 4:	Prompt 5:	Prompt 6:
Level 1: Stereotyping Others			
Level 2: Personal History without Connection to Others	<p>In order to understand the educational experiences of others, as an educator, I try to collect data from an array of sources. I look at each student individually and holistically to analyze their educational history. <b>(Level 2; lack of racial connection; Nn)</b></p>	<p>In my larger family, there are always really insensitive comments made about lots of different groups of people, and its hurtful and harmful. The stereotypes and comments are not things I address any more but I sometimes wish that I had responded differently. <b>(Level 2; lack of focus on oppression; Yy)</b></p>	<p>My experience of these types of difficult conversations is that they require preparation and holding a clear goal in mind, on my part. I have to be invested in maintaining a relationship in order to do this kind of work. <b>(Level 2; privilege; Bb)</b></p> <p>I am at the beginning of my learning about this subject and some of the conversations we're having are the first moderated conversations across racial differences I've experienced in my professional life. <b>(Level 2; privilege; Bb)</b></p> <p>I also am aware of the pitfalls as a white woman at this moment in history to center</p>

			<p>whiteness or my unexamined points of view in this type of situation. <b>(Level 2; risk; Bb)</b></p> <p><b><i>Regarding speaking about race (less likely to):</i></b>  I see more sorting and selecting of students at all school levels than ever before. I truly believe that as long as we continue to sort and select students solely by a specific academic ability, we will not be able to achieve equity or social justice in our classrooms. <b>(Level 2; resigned to oppression; Ff)</b></p>
<p>Level 3: Acknowledging Others in Isolation</p>	<p>I help them [students] by meeting them where they are, by accepting them where they are, and letting them know they have the ability to move forward, and showing them how in small deliberate steps and with a great deal of laughter and respect and patience. <b>(Level 3; personal response; Ff)</b></p> <p>You can get books or recommend books based on their interests. Students can apply and share their learning of concepts in different ways. This is what I love about Project Approach. Some students are artistic, others love to write, while other students may enjoy acting. <b>(Level 3; culturally responsive; Oo)</b></p>	<p>I often find myself at a loss for words or actions in the moment. I feel unskilled in responding in a way that would be useful in educating the offender, and I am conflict avoidant. <b>(Level 3; absence of advocacy; Bb)</b></p>	<p>I would be least likely to express injustices of race with a group of white upper class adults if I am the only black middle class adult in the room. In my mind, this is the group of people that are most likely to have ideals that do not align with my own so I think it would be hard for me to express my true feelings without a "back up". <b>(Level 3; nature of oppression; Dd)</b></p> <p>I feel ashamed to answer this question, but I am going to answer honestly. I am not sure. It depends on the environment, the tone of the conversation, who is present, and if I feel safe in speaking. I don't like arguing. I don't like having to try to convince someone of another perspective, especially if they are not interested in considering another perspective. If the people in the conversation are not open, I am liable to feel strongly enough about the topic to speak up, but not to argue, fight, or debate. <b>(Level 3; lack of advocacy; Zz).</b></p>
<p>Level 4: Considering how to Effect Change</p>	<p>To ensure that all students have a sense of worth, I try to inject part of their</p>	<p>But there are more times when I have not. I cannot think of many times that I</p>	<p>I know that I would be more comfortable with speaking on it, depending on the setting. I</p>



	<p>culture and background into the lessons I create. Seeing your reflection in the world around you helps you see value in the parts that make you... you. <b>(Level 4; social justice in school; Aa)</b></p> <p>I have to provide a learning environment that makes a place for individual expression of identity and differences in the class, and that provides curriculum that is challenging and provides opportunities to find connections between what is happening in the classroom and what is happening in the world <b>(Level 4; responsibility; Bb)</b></p> <p>I can understand the educational experiences of others by observing and discussing it with them. I can ensure students feel a sense of worth and meet their potential by trying to overcome my implicit biases and working with others to overcome theirs. <b>(Level 4; reflective positionality; Dd)</b></p> <p>Create access and opportunity to all students to express themselves both socially and academically. Check myself and the implicit bias that I may have. Do not let implicit bias keep me from moving the dial on Social Change and Racial Justice <b>(Level 4; Responsibility; Kk)</b></p> <p>We need to have real discussions, real questions, and real data! We need to be open and honest with one another. We need to step outside our normal</p>	<p>have responded to microaggressions towards others, but I should be as advocative for others as I am for myself. <b>(Level 4; reflective positionality; Dd)</b></p> <p>I might not have been willing to say that in the past, but I work on my ego every day to confront, question, listen, and receive response to equitable conversations and thoughts. <b>(Level 4; responsibility; Ee)</b></p> <p>There are a LOT of times that I wish I had responded in the moment when I witness microaggressions. If I struggle to communicate properly (rather than offensively or out of anger), I choose silence. <b>(Level 4; responsibility; Gg)</b></p> <p>I feel like if you make it clear immediately that you are not comfortable or on the same page as the person, they may feel less inclined to express their rhetoric freely. <b>(Level 4; responsibility; Hh)</b></p> <p>I don't know if I personally am ready to have full discussions every time I witness a microaggression, although I am hoping to get there, but they need to at least be made visible and/or clarified and called out. <b>(Level 4; risk and preparation; Mm)</b></p>	<p>would be more comfortable talking about it at school than some other places. I think I would be less comfortable talking about race on a very public scale such as on the news. I feel like that can lead to people targeting me and people possibly sending death threats. Too often, I see the very dangerous backlash of people speaking up on different issues and that is scary. <b>(Level 4; positionality; Jj)</b></p> <p>When we are having these conversations, it might seem like we're talking about specific issues, but what we're really talking about is who we are and our perspective on what the world should be basically the reflection of our thoughts and how we see the topic. <b>(Level 4; positionality; Ss)</b></p>
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	<p>comfort level! We need to have trust in ourselves and our peers. This would translate to the classroom. Knowing our students as a person with skills and talents, and not a test score or number <b>(Level 4; social justice in school; Vv)</b>.</p> <p>Share your stories so common threads and experiences are known and used as reference to a growing relationship. But don't stop the growth or hesitate when things seem to move differently or not according to plan, instead embrace those moments as the best each person has to give and grow from it. <b>(Level 4; social justice in school; Ee)</b></p>		
Level 5: Social Justice Growth and Advocacy		<p>I think getting to a point where you feel comfortable addressing people is a good goal. It can be hard to be that kind of confrontational, but if you take the time to educate yourself it gets easier <b>(Level 5; need for support, advocacy out of school; Xx)</b>.</p> <p>I want to dismantle and disrupt racial injustices and systems of inequity. It's interesting that the spaces where I am less likely to express injustices of race, are with the people that I am closest to, more like friends than just colleagues. I am working on this! <b>(Level 5; continued development towards social justice; Kk)</b>.</p>	<p>Because this topic is something that is deeply important to me, I still try to express how I feel and push discussion on racial injustices. This goes along with the idea that it is not enough to not be racist, we must be anti-racist. We must continue to have these discussions, regardless of who is present in the conversation. <b>(Level 5; Social justice transformation; Cc)</b></p> <p>I need to become more comfortable doing it (speaking up about race) in school settings, but also in extended family settings...which are always so excruciatingly filled with dread and anticipation about these types of conversations. <b>(Level 5; personal development towards social justice; Ee)</b></p> <p>advocating for students is a big part of my job - and I cannot do this without addressing racial inequities that exist - on all levels. Having had so many</p>

			<p>opportunities to have real conversations with children who express that they feel targeted because of their race, really helps drive the importance of creating a safe space for these conversations to be had and engaging in ways to intentionally break down existing barriers. <b>(Level 5; responsibility; Ll)</b></p> <p>I hope that I am just as likely to express my beliefs when there is a person of color present. I think it happens less often because people often reserve their prejudice comments and behaviors for when they are with same race people. I am working to eliminate those spaces where it is uncomfortable and continue to express my views in a positive and thoughtful manner without anger. <b>(Level 5; development; Uu)</b></p>
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Longer quotes:

**Prompt 1** – working with diverse student populations

From Ll: Just this week - I had a staff member respectfully call me out because I used the term 'boys and girls' when addressing her class - instead of a more gender neutral phrase. Although I was mad at myself for not catching this - esp. because it's something I've really worked to get better at...I was also really thankful that she mentioned this to me - especially given that this was our first face to face meeting. I think this interaction really speaks to the space that has been created here at Parkside to have these interactions as well as the professionalism of a staff that is truly trying to break down barriers. **(Level 4; social justice in schools).**

From Cc - One thing I do remember is that in elementary school I was often asked to act as a class "tutor" where my teacher would pair me with another student to review a topic we had just learned in class. It wasn't even explained as a situation where two equal partners were to discuss what we learned. I (the white student) was always the tutor and the other child was my "student." I do distinctly remember that I was often paired with a student of color and I think this has and will continue to heavily weigh in on my current implicit bias **(Level 4; Reflective Positionality)**

From Rr – It [fighting against over-identification of students of color] changed the way I saw well-meaning teachers who were unintentionally setting low standards for certain students. It changed the way I interacted with teachers and staff who saw the injustice and stayed silent or even contributed. It changed the way I saw myself and it allowed me to change my entire teaching pedagogy. It allowed me to see broken systems and parts of the world that I hadn't experienced as a white, middle-class woman. It started my journey. **(Level 4; positionality and responsibility).**

**Prompt 2 – Oppression, implicit bias, and personal response**

From Ee - The best thing I can do is monitor myself and others around me for perpetuating and embedded implicit bias. Talk to my daughters about it and have family conversations around topics like "niceness doesn't mean we don't have bias". Admit when I am guilty of such and learn from the person I aggrieved with my implicit bias. Reflect with people outside my circle about breaking the barriers and having critical conversation about how bias impacts the work in school. **(Level 4, Plan of Action/How to Support)**

**Prompt 3 – Personal identification, meaning in this environment, and does that description meet their ideal**

From Jj - I identify as Black. In society, I feel fear and pride in being Black. When I became an adult and went to college, I began to have more pride in being Black but also more fearful because I realized how much the world hates us. I love being Black because we are just amazing! We are intelligent, talented, loving, kind, and so strong! But I also realize that we are human and we have our moments of "weakness". My description is not ideal because I don't want to be fearful of what may happen to me or my loved ones. I don't want people to hate my race.

I really wish people would realize that it's quite ridiculous to solely judge someone on their skin color. I want to live in a world where my friends, family, and I can feel comfortable wherever we are and know that we will be treated fairly. I constantly have to be aware of my surroundings (Am I the only black person around? Am I driving through a predominately white area? If my car breaks down, will I be safe in this predominately white area?). It's sometimes exhausting and very disheartening to always feel like I have to be overly cautious just because of my skin color. **(Level 4; examination of positionality).**

From Ww - I identify as a young Black woman. Identity is everything to me, it defines who I am as a person. It defines my culture and how I am proud of my culture and what my culture represents. I think I am a great representation of who my ancestors were; strong, resilient, hardworking, loving, and accepting. The description I described meets my ideal, but it doesn't always meet up to the standards of other people or races. As a black culture, we look at the strengths that our people represent but other culture look at the weaknesses that the media feeds to them. Other races doesn't know our history before Slavery so they base that history on who we are as a people. **(Level 4; plan of action, how to support others).**

**Prompt 4 – Understand the educational experiences of others – ensure all students feel a sense of worth and meet their potential**

From Xx - I think the best way to do this is by giving your students the opportunity to not only share, but also to approach learning from a place where they feel interested and comfortable. People are all incredibly different, but most crave the opportunity to be open about themselves and their interests. In allowing students to be unapologetically them in class, we give them a place of comfort. **(Level 4; liberation)**

**Prompt 5 – Responding to microaggressions and describing a time they responded or wish they had**

From Hh - When playing a game of sand volleyball 4 against 4, there was a white male that clearly was the jokester of the group. He was constantly trying to make people laugh, but honestly, I never thought he was funny and was already annoyed with him by the time he made this comment. Well, he hit a ball that was close to the line and a player from the other team (young Asian female) called it out. Well, he disagreed and made a joke about why we can't trust a line call from someone with such tiny eyes. I remember immediately being pissed when he said it and noticed the girl. She looked like she wasn't trying

to show that it bothered her, but I knew it did. And it constantly bothers me that I did not speak up for her about him being an ass. **(Level 4; Responsibility)**

From Rr - The time I wish I had responded to a microaggression is when I overheard a parent telling a coworker that they were hired because of affirmative action. I was in the room next door and wasn't a part of the conversation, but I wish I would have gone into the hallway and told the parent how incorrect and disrespectful that comment was. I regret not coming to my coworker's defense and think about this situation often. I hope that my lack of response and the guilt I feel for not intervening will enable me to directly address microaggressions in the future. **(Level 4; Responsibility, Positionality; Preparation).**

**Prompt 6** – speak about race in support of those who might not be present

From Ll: My mind is swirling from our meeting today with how school systems unintentionally drive and shape [how] young children see themselves and others the way they do. Who is sent to the office? Which children eat breakfast? Who clips 'down' on the behavior charts? Who rides the crowded buses? Which parents can come to school immediately when their child is sick and why? How does ability grouping perpetuate racism? Who gets into 6plus math? How does the news treat POC? And what kind of internal messages do kids get when a controversial 2020 movement is to say that Black Lives Matter and half the country is outwardly denying this! **(Level 5; Responsibility towards social justice in and out of school)**

From Xx - I think that any spaces where I'm less likely to express myself on injustices of race are spaces where people of color ARE present in the conversation and someone more knowledgeable than myself could add to the conversation. In a group of white people I feel like I can truly add to the conversation where, in a group of people of different races, I want to make certain that I don't speak over a person of color. **(Level 4; Positionality and responsibility).**

## Appendix N

### Self-Identity Inventory Pre-Post Survey Differences

In order to determine the overall pre-post survey change per OTAID stage, and the resultant collective growth, a chart of differences was created and color coded (Figure A.3).

Identifier	Diff_Individuation	Diff_Dissonance	Diff_Immersion	Diff_Internalization	Diff_Integration
Ee	-0.33	-0.67	-0.33	1.33	0.33
Kk	-0.33	-1.00	0.00	-0.33	0.67
Zz	0.33	1.33	0.33	0.67	0.67
Ss**	0.33	-1.67	0.00	1.00	1.33
Ff	-1.00	2.00	0.00	1.00	1.00
Cc	-0.67	0.00	0.33	1.00	0.00
Xx	-0.33	0.67	0.33	1.33	0.00
Ll	0.00	0.33	-0.33	1.33	0.00
Oo	0.00	1.00	0.00	2.67	-0.33
Yy	0.00	-0.33	0.67	-0.67	0.00
Dd	0.33	-0.33	-0.67	0.00	0.67
Mm**	0.33	-0.33	0.00	-0.33	0.67
Tt	0.67	-0.67	-0.33	0.00	1.00
Vv	1.00	-0.33	-0.67	0.67	0.67
Gg	-1.33	0.00	0.00	-0.67	-0.67
Qq	0.67	-0.67	0.00	0.00	-1.33
Ww**	1.00	1.00	0.67	-1.00	0.00
li	-0.33	0.33	-1.67	-0.33	-0.67
Rr	-1.00	0.67	-1.33	1.33	0.33

Figure A.3. Journal Participants disaggregated by pre-post growth trends (positive, neutral, or negative).

The researcher noted trends by color: light for positive growth, medium for neutral, and dark for negative<sup>21</sup>. Individuation and Dissonance were coded light grey if there was a reduction in participants' affinity with those constructs by -0.67 or more. Medium grey was indicative of neutral or no change (0.00 and +/- 0.33) and dark grey indicated those with a higher affinity with Individuation or Dissonance (+0.67 and higher; this is opposite of the anticipated effect of the intervention).

<sup>21</sup> While writing this, the researcher realized she fell into the implicit bias trend of indicating "good" with light colors and "bad" with dark. The resulting figure was kept to acknowledge and accept responsibility for my bias.

The Immersion construct, being in the center of the five stages, was considered positive at 0.00 or +/- 0.33. Neutral was determined to be +/- 0.67 and negative, highlighted dark grey if at or below -1.00.

For Internalization and Integration, the researcher coded the opposite of Individuation and Dissonance. A reduction of -0.67 or more received dark grey, no change medium grey (0.00 and +/- 0.33) and light grey for +0.67 and higher.

Visualizing the results, the researcher determined overall positive, neutral, or negative growth for the participants and coded their identifier the corresponding color. If an individual had three areas of a type of growth (such as positive), the initial coding was the same. If two areas, the researcher looked to see if the other constructs trended towards an ultimate designation. For example, Participant Qq had two dark grey areas (Individuation and Integration, the opposite ends of the continuum) and two light grey areas (Dissonance and Immersion) with Internalization neutral. As the Individuation and Integration differences showed affinity levels the opposite of what would be expected with a participants' positive growth, and the other constructs showed minimal growth (-0.67, 0.00, and 0.00, respectively), the overall pre-post intervention growth status for Participant Qq was coded as negative.

The coding of journal participants in this way allowed subgroups to emerge. Using stratified purposeful sampling, the researcher chose a participant from each group and qualitatively analyze their submitted journal entries for indicators of cultural competency as an a priori theme. Myers and colleagues (1991) OTAID framework was then used to further code participant responses into levels of identity development (personal, interpersonal, and institutional; Myers et al., 1991). Participant Ss was selected as a positive growth example,

Participant Mm as neutral, and Participant Ww as an example of whose pre-post survey responses indicate negative growth as measured by the SII (Sevig, Highlen, & Adams, 2000).



## Appendix O

### RQ2 - Select Journal Participants Coding Matrix

A Priori Theme: <b>Cultural Competency</b> . Quoted evidence and <b>(Codes)</b> within each a priori theme	Sessions 1-3	Sessions 4-6
<p>Dusty: Reduced (Participant Yy)</p> <p><b>Dissonance and Immersion</b></p> <p><b>Internal struggle</b></p>	<p>Power over people is a common thread in our society and it doesn't take much to maintain. Staying open to being made aware of the moments and comments of my own implicit bias and being able to tolerate that awareness (whether I realize it myself or someone points it out to me) is important. <b>(Immersion; neg. feelings about dominant culture)</b></p> <p>My identification as White means that I have typically felt centered. In this environment (our school) I see that I am not centered. I think it feels off balance, unknown, and leaning positive <b>(Dissonance; alienation)</b></p>	<p>Being intentional about challenging any assumptions I may make of a student or their story... looking at students as a whole entity and not just a snapshot of something <b>(Immersion; understanding own subgroup/beliefs)</b></p> <p>In my larger family, there are always really insensitive comments made about lots of different groups of people and its hurtful and harmful. The stereotypes and comments are not things I address any more but I sometimes wish that I had responded differently <b>(Dissonance; exclusion)</b></p> <p>In presence of people who I know support my views, I can speak about race, especially via online settings. I am not able to confront my family members in race conversations <b>(Immersion; pride w/own group)</b></p> <p>This work and process makes me see I am not the best advocate for all in that I am comfortable reflecting and understanding and working on my own biases but not able to speak about race in all situations. Realizing this is sad. <b>(Dissonance; exclusion)</b></p>
<p>Mesu: Reduced (Participant Ww)</p> <p><b>Immersion</b></p> <p><b>Better than pre-post</b></p> <p><b>On the edge of change</b></p>	<p>My goal is always to learn and love people for who they are... this has made me a better teacher because I am willing to learn about my students and the diversity they bring to the classroom <b>(Immersion; immerse into subgroup)</b></p>	<p>When you don't let people know how you feel [about microaggressions], that gives them the right to continue and feel comfortable to say things that are not right. <b>(Immersion; neg. feelings towards those with different ideas of oppression)</b></p> <p>THESE TWO CONFLICT</p>

	As a Black culture, we look at the strengths that our people represent but other cultures look at the weaknesses that the media feeds to them <b>(Immersion; neg feelings towards dominant culture)</b>	I am always willing to speak on how I feel about race. I want to be a voice for others who may feel like they don't have a voice. I feel like talking about the injustice of race is harder when talking to people that look like you <b>(Immersion; neg. feelings towards own group with different perceptions)</b>
<p>Pepper: Neutral (Participant Dd)</p> <p><b>Immersion and Internalization</b></p> <p><b>Equity and Identity Advocate</b></p>	<p>Growing up, I always felt like I didn't belong with a group of kids for various reasons, I wasn't Black enough, too White, wasn't White enough...there was always a reason. It has made me very sensitive to the way students leave each other out of things, not just because of race but for any reason. <b>(Internalization; understanding nature of oppression)</b></p> <p>I can address my own implicit biases and point it out when I see it in others. I can also do my best to educate others about the impact implicit bias has and why it is important to come to terms and fight against it ourselves. <b>(Internalization; positive self concept)</b></p> <p>[Being Black] means that people see me as Black and I have to think about where I am, who I am around, how I sound, and what I wear all day long, in all environments. I am constantly on edge about the way others perceive me. <b>(Immersion; neg. feelings about dominant culture)</b></p>	<p>I can...[try] to overcome my implicit biases and work with others to overcome theirs. <b>(Internalization; tolerance of others)</b></p> <p>The only way to disrupt microaggressions is to change the way the person thinks, which is not always easy. <b>(Immersion; feelings towards others)</b></p> <p>I cannot think of many times that I have responded to microaggressions towards others, but I should be as advocative for others as I am for myself. <b>(Internalization; integration of subgroup identity into self concept)</b></p> <p>I would be least likely to express injustices of race with a group of White upper class adults if I am the only Black middle class adult in the room. <b>(Immersion; neg. feelings towards dominant culture)</b></p> <p>In my mind, [White people] are the group of people that are most likely to have ideals that do not align with my own. <b>(Immersion; neg. feelings towards dominant culture)</b></p>
<p>Merlin: Neutral (Participant Mm)</p> <p><b>Immersion</b></p> <p><b>Works with pre-post</b></p>	I have found that my previous assumptions about my students included [stereotypes regarding low SES and poor behaviors with Black children] Unfortunately, I did not know I had these biases when I first started teaching.	It is easy to make assumptions based on what we think a person has went through, but the only way to really know is to ask and listen. <b>(Immersion; immerse into sub culture)</b>

<p><b>Challenging their beliefs</b></p>	<p><b>(Immersion; identification with subgroup)</b></p> <p>If a person in power has a bias they will make policies and decisions that can oppress someone due to who they are <b>(Immersion; neg. feelings about dominant culture)</b></p> <p>It will take critical analyses of every situation, especially if my decisions impact others, to make sure there are no instances of oppression due to my biases. <b>(Immersion; neg feelings towards own group)</b></p> <p>I think my privilege is showing when I say that I've never thought about my racial ideal <b>(Immersion; neg. feelings about own group)</b></p>	<p>I really want to get better at pointing microaggressions out and making that person clarify or confront what they just said or did. I am a conflict avoider and peacemaker by nature though, so this is something I have to consciously work through. <b>(Immersion; neg. feelings about dominant culture)</b></p> <p>I think one of my hardest spaces is with people that I am closest to, like family. They are people who I want to keep good relationships with and (for some of them), they are people that I have very different opinions from. <b>(Immersion; negative feelings about own group)</b></p>
<p>Chena: Increased (Participant L1)</p> <p><b>Immersion and Internalization</b></p> <p><b>Desire to make an impact</b></p> <p><b>Be a disruptor</b></p>	<p>My job is to advocate for needed change on all fronts...[I need] to accept that there is life-long learning and lessons [to do so] <b>(Internalization; positive integration of subgroup identity into self concept)</b></p> <p>If I am committed to being an agent of positive change and trying to help break down oppressive systems and structures, I have to be willing to move past what is easy and comfortable <b>(Internalization; increased understanding of oppression)</b></p> <p>I know that my 'Whiteness' perpetuates stereotypes and biases that I must constantly be aware of... I know that I experience privilege for just being White <b>(Internalization; increased understanding of oppression)</b></p>	<p>I think it is important as much as possible to discuss microaggressions as they occur. <b>(Internalization; increased understanding of oppression)</b></p> <p>I also feel like I am getting better at interrupting and challenging microaggressions personally and professionally. <b>(Internalization; increased understanding of oppression)</b></p> <p>While I believe I have come a long way, there are definitely times when I have not said anything, not said enough, or backed down when maybe I should not have. <b>(Immersion; neg. feelings towards own group)</b></p> <p>Although, logically I know I should always interrupt racism, I know that I do not always take all opportunities to do this. I'm sure some of this is probably linked to my own fears and insecurities. <b>(Immersion; neg. feelings towards own group)</b></p>

<p>Olive: Increased (Participant Ss)</p> <p><b>Average Immersion (with Individuation and Dissonance included)</b></p> <p><b>Neutral qualitative</b></p> <p><b>Treat everyone the same</b> <b>Golden rule (treat others as you want to be treated)</b></p>	<p>It is time to move and transform the ways we think about and engage with others (<b>Dissonance; exclusion</b>)</p> <p>By respecting [others]...we can face these issues [of oppression] and make it useful for [education] (<b>Immersion; pride identifying with others like herself.</b>)</p> <p>When we follow...the values which are the real reflection of us, [it] will help shape our life experiences like how we see things, people, etc. (<b>Individuation/Personal; connection to societal conventions</b>)</p>	<p>There are ways to mitigate [microaggressions] in positive and productive ways through healthy dialogue, humility, and empathy. (<b>Immersion; feelings of pride in subgroup</b>)</p> <p>We need to understand the privilege that shapes their (individuals of another race) own world view and educate ourselves on the things we need to personally learn and unlearn in order to be a better advocate (<b>Immersion, Interpersonal; positive integration of subgroup identity</b>)</p>
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